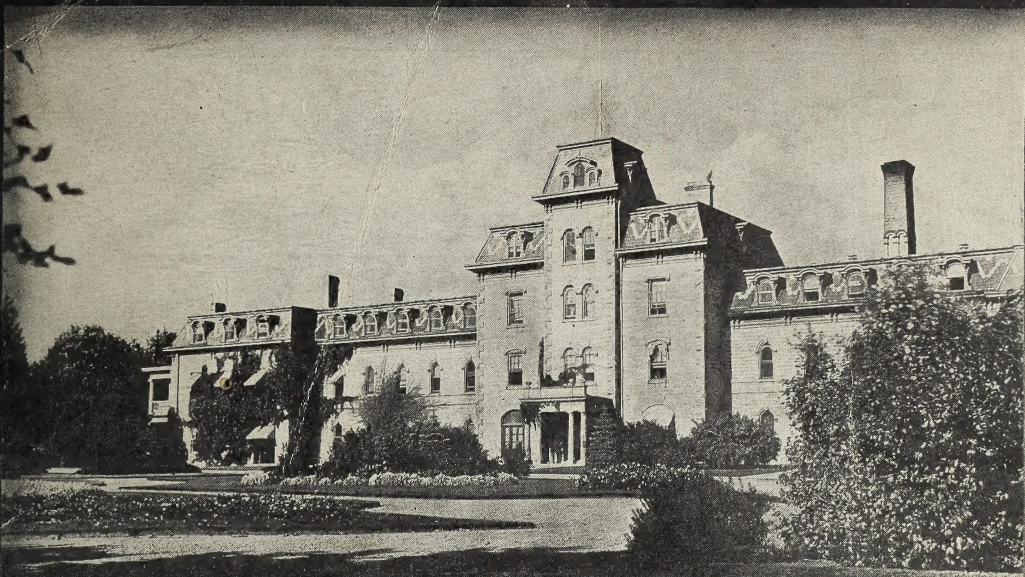
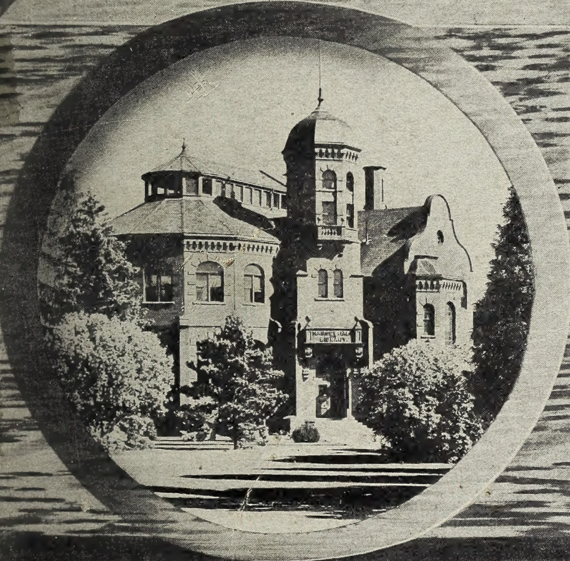
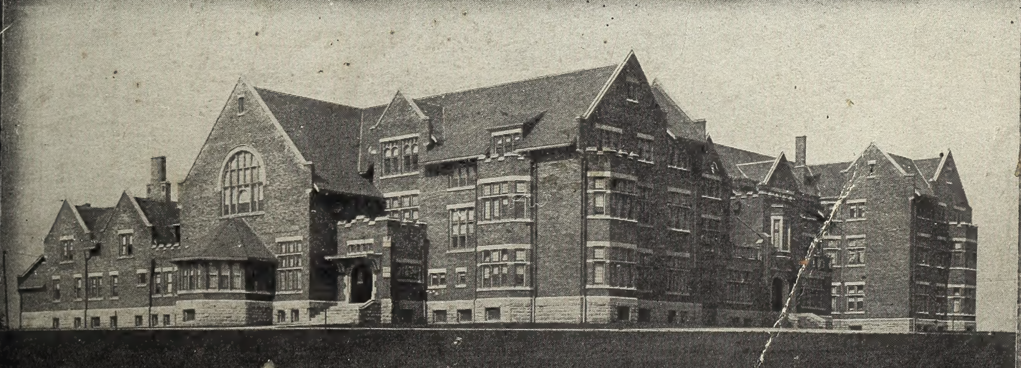




# THE O.A.C. REVIEW

JUNE, 1911



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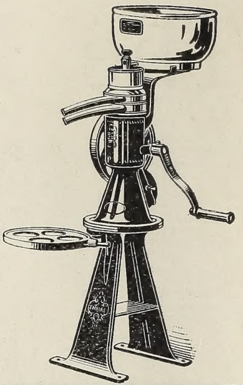

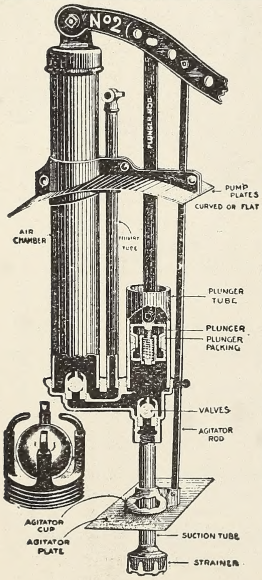

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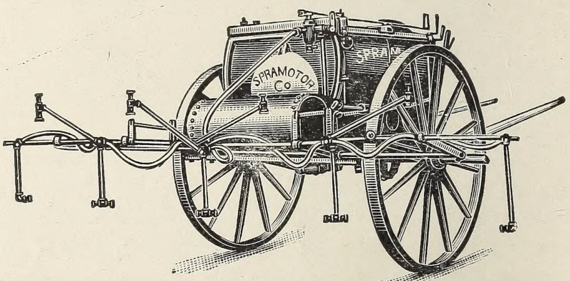

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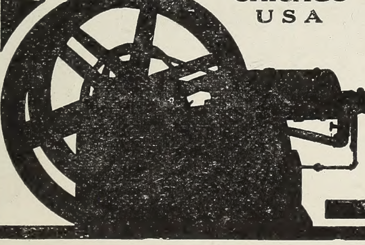

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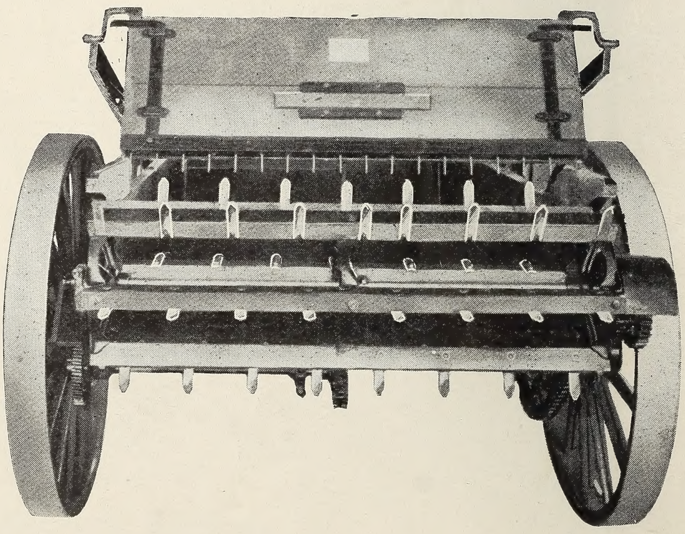

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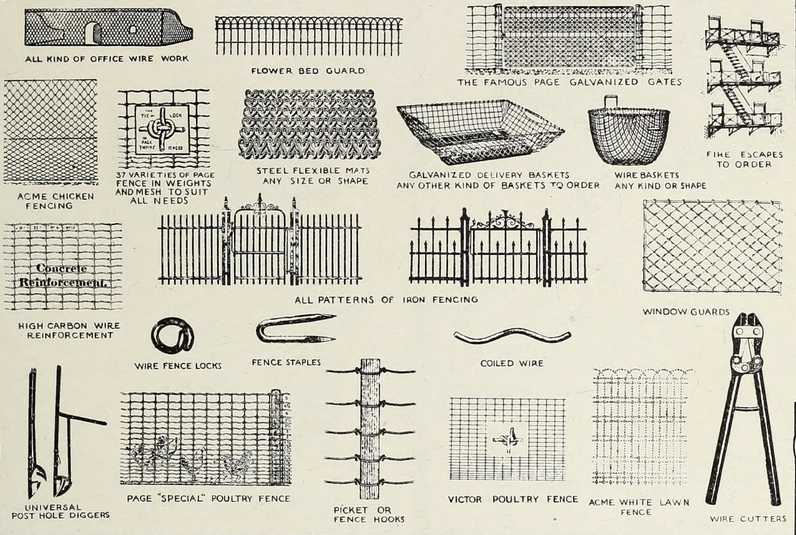
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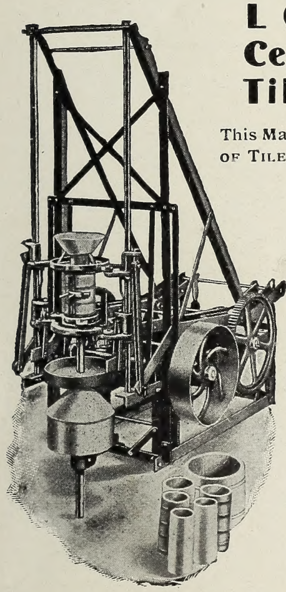

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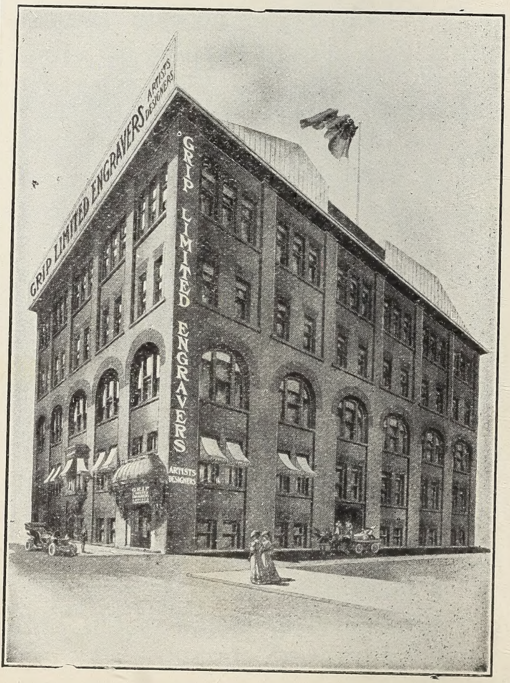

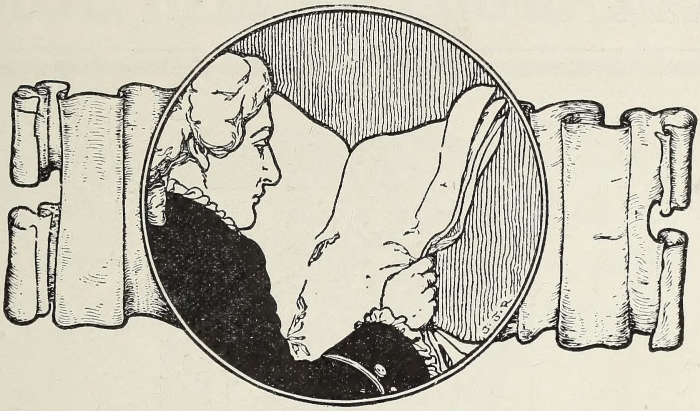

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THE O. A. C. REVIEW

THE DIGNITY OF A CALLING IS ITS UTILITY

VOL. XXIII. JUNE, 1911. NO. 9

# Canada and the World's Peace Movement

W. L. SMITH, EDITOR WEEKLY SUN, TORONTO.

ALL Canadians profess a desire to see peace maintained. As to some of the methods proposed with a view of attaining this end there is room for question. Some there are who would have Canada create a naval armament for the purpose of assisting Great Britain to keep on the high seas a navy equal to that of any two other powers combined. They would also have us create an army available at all times for service in possible Imperial wars. They say with this done the Empire would be in a position to enforce peace by the threatened use of the mailed fist.

Any attempt to establish peace in this way must prove futile; and for two reasons.

In the first place all history, from the time of the Roman Empire to Napoleon I., proves that peace cannot be permanently maintained through the preponderance of any one power. If the end we all desire is to be brought about it must be by general agreement among the nations; not by any one nation, or any two nations, assuming the role of big policeman towards the rest. It is not in human nature, either in individuals or in nations, to assent to arbitrary rule even for so beneficient a purpose as the preservation of peace. International peace, to be permanent, must have as its basis international cooperation.

In the second place the Canada of today, and still more the Canada of tomorrow, cannot, in my judgment, be tied up to any such scheme of Imperialism as the one proposed. The present character of our population and the changes in this respect that are taking place, present insuperable obstacles in the way. Fifty years ago in Ontario the word "home" meant England, Ireland or Scotland, because most of the people then here had come from Great Britain. To-day, in this the most British of the nine Provinces now forming the Dominion, the majority of those of active age represent the third generation at least on Canadian soil. Moreover, while the great majority of us are still of British ancestry, there is a large and growing minority made up of people from continental Europe, as witness St. John's ward in this city. In the Western Provinces it is probable that at least a third of the population is from the United States and that not less than one-tenth is from continental Europe. The admixture of alien elements is going to proportionately increase, and, as years pass, even the native born, of British ancestry in Ontario and the West, will find their interests more and more centered in the land of their adoption with a consequent lessening of concern in the land of their fathers. All this being so, even if there were no Quebec to be considered, Canada is bound to be drawn away from the things which concern Imperial statesmen in India, in the Persian Gulf, and in Egypt.

This does not mean that this country will lose interest in the preservation of world peace and in the blessings that may be thereby secured for Great Britain in common with all humanity. But the Dominion will work along different lines than those marked out for her by those who would rest peace on force. The appeal of the Canadian people will be to reason and justice rather than to the god of battles. And circumstances are such as to enable us to play a leading part in this other and better way. We are not cursed with a heritage of hates arising from past wars. There is not, on the northern half of this continent, any of the race hatreds such as exist between France and Germany. Not only are we free from the germs left by past wars—the most prolific source from which wars are bred—but we are absolutely invulnerable against attack save from one source. The alleged danger of invasion by Germany on the one side or Japan on the other, is based on nothing more substantial than disordered imagination or a nightmare following on indigestion. Ten years ago it taxed the resources of Great Britain, backed by the colonies, to subdue two South African States with a combined population less than that of Toronto; and this, although the ports leading to the hostile territory were already in the hands of the British. Now, then, could Germany or Japan, with no landing place already in possession, with only one-sixth the tonnage available for transporting troops that Britain possessed at the time of the South African war, expect to conquer 7,000,000 Canadians?

The only country in a position to make serious war in Canada is the United States, and against the United States we possess a better defence than could be secured by a line of fortifications along the border and fleets of Dreadnoughts on two oceans. This defence is found in a common language; common ideals, in the union of our church and fraternal societies, in family ties, in the presence of a million and a half Candians in the United States and three-quarters of a million Americans in Canada.

Canada, then, free from all danger of attack, is acting in concert with the United States, in a position to give a powerful impetus to the movement making for world peace. These two countries have, indeed, already set a splendid example for the nations of the old world in this particular. Ever since 1818 the Great Lakes uniting these kindred peoples have been free from the presence of war ships. The frowning fortresses once found here and there along the boundary dividing them are falling into decay. Recently the Dominion and Republic have gone further; in what is known as the Water Ways Treaty, but which deserves a more comprehensive title, they have provided in advance the machinery for settling, by a joint tribunal, with reference to the Hague if necessary, of any question that may hereafter arise between them. They actually have settled, through the Hague, a question relating to sea coast fisheries which had been a constant source of irritation for 100 years and settled it in a way that has met the cordial approval of educated public opinion on both sides of the line.

One thing more these kindred nations should do. The centennial anniversary of the end of one war that has taken place between them will soon occur. On both sides of the line ill-advised people are urging the adoption of a course that may, in a measure, fan into fresh life the dying embers of past fires, On the American side it is proposed by some to celebrate Perry's victory over the British fleet on Lake Erie. On the Canadian side there are proposals to celebrate the Canadian victories of Queenston Heights and Lundy's Lane. Would it not be more in keeping with the civilization of this 20th century of the Christian era to hold an international Thanksgiving for a hundred years of peace, and to connect with this a solemn covenant that the peace so long maintained shall never again be broken."

The Latin States of South America, which we have been wont to look upon as inferior to us in civilization, have really outstripped us in the better way. Near the close of the last century Chili and Argentine were brought to the verge of war over a boundary dispute. In both countries there was arming in feverish haste on sea and land; in both a conflct was believed to be inevitable. Then beter counsels prevailed. The British Ministers at the two capitals appealed for peace. The appeal was vigorously supported by two Catholic bishops—one in Chili and the other in Argentine. A special appeal was made on Easter Sunday to the conscience and Christian spirit of both peoples. The appeal was heard; the question in dispute was left to the decision of King Edward, and his decision was accepted by both nations. Then armies were disbanded, battleships were sold, an arsenal was turned into an industrial school. And something else was done. Cannon created for war were cast into the melting pot and from this pot came forth a giant figure of The Christ, and this statue was erected at the highest point in the Andes at the very centre of what had been the disputed territory. On this statue were carved the words: "Sooner shall these mountains crumble into dust than Argentines and Chileans break the peace to which they have pledged themselves at the feet of Christ the Redeemer." The noblest monument, with the grandest inscription erected in the history of the race. Would it not be well if, instead of erecting memorials on battlefields, we were, at the coming centennial of peace, to erect a monument between Canada and the United States such as that now standing between Chili and Argentine? An action such as that, attracting as it would world-wide attention, could hardly fail to give an impetus to world-wide peace.

Some of the other Latin American States have set an example of another kind—one which does not appeal to sentiment or conscience to the same extent as the one just noted—but one that is, perhaps, more practical. Some four or five of the petty states of Central America, each independent of the other, have established a joint International Court for the adjudication of questions arising between them. This International Court, as I understand it, stands somewhat in the same position towards these independent states as the Supreme Court of the United States stands in towards the federated States of the adjoining Republic, the main difference being that this Central American Court depends solely on moral force for the acceptance of its decrees.

It has been said, no matter what you do, that you cannot abolish war; that human nature will lead men to fight. If that be true of nations it must also be true of individuals. But we have changed human nature as regards individuals. When my grandfather was in his prime the duel was the common method of settling personal quarrels in England. My father was well on to middle life before the practice had wholly ceased. I remember, as a lad hearing my uncle, a good Christian, express approval of the duel. To-day, if one of you proposed pistols for two and coffee for one the police would arrest you either as a criminal or a lunatic. What we have done as individuals we are beginning to do as States. Central American states, as I have just said, have created an International Court for the settlement of differences between their Governments just as civil courts in Canada decide questions of property and civil rights between individuals. As between Canada and the United States we have, too, under the Water Ways Treaty, at least gone so far as to provide a court to which questions arising between Canada and the United States may be referred and the decision of which shall be binding. As between other nations the principle of international arbitration, as distinguished from the principle involved in the creation of international courts has been widely accepted. Since 1814 well on to 300 disputes between nations—disputes such as in the time of our grandfathers would have led to war, have been settled in that way. To 70 of these arbitrations Great Britain was a party and to 60 the United States was a party. That these were no mere minor cases is shown by the fact that three arbitration cases between Great Britain and the United States involved $22,000,000 in the aggregate. A greater achievement was the peaceful adjustment of the Dogger Bank affair because that—the firing on a British vessel by Russian warships and the destruction of British lives—involved a question of national honor and that at a time when public feeling in Britain had been greatly inflamed. No less than ninety nations have, I believe, accepted the principle of arbitration, in a measure at least, but in all these acceptances there have been reservations, questions of "national honor," or of "vital interest" have been excepted.

It has been left to President Taft, all honor to him for the doing of it, to go further and declare for the settlement of all international questions by reason and justice rather than by force. President Taft has gone further than propose arbitration. He has proposed that a permanent International Court be created, to which all international questions must of necessity be referred and which court shall decide all questions in accordance with equity and justice. I believe this action by President Taft will be more than sufficient to place his name beside that of Lincoln in the page of history. Lincoln struck the shackles from the wrists of 4,000,000 physical slaves. The action of Taft promises to free the minds of all humanity from the mental slavery and superstition which is the heritage of ages of conflict.

The United States has already, not by design but by accident, by force of circumstances, given to the world the most wonderful concrete example in the possibilities of world peace the world has ever seen. Within the memory of men still living the Republic has taken in over 20,000,000 immigrants from all the civilized countries of the world. It has taken in Germans, and Frenchmen, Austrians and Russians, Norwegians and Poles. It has proved that these peoples, who had been at one another's throats through countless centuries, can live in peace side by side and has thus demonstrated the possibility of others of these same races living in peace side by side in the old world.

What the United States has done in the past century Canada will do in the present. We are now attracting immigration not only from the old world but from the United States as well. We are going to present the greatest admixture of races since the beginning of time and in doing this we shall repeat and emphasize the lesson of the possibilities of world peace already set by the United States. Because of this admixture of race in Canada we cannot transform the Dominion into part of an Imperial war power, but we can make of this country something vastly better—a leader in the movement making for world peace. The first step should be in the form of acceptance of the Taft proposal and the creation of a court with power to adjudicate upon all questions arising between these two countries, and to which all questions must of necessity be referred. The second should be in the form of preparations for an international celebration in 1915 that will magnify peace, not glorify war; and the third should take the form of proposing a joint agreement under which even naval training ships shall be excluded from the great lakes. Action such as this would be a good thing for America; it would be a great thing for the world. The example set by two nations, side by side, each maintaining a separate existence, and without a fort or warship dividing them, could not fail to have a powerful effect on the old world. Even if the moral effect of the example failed, economic forces would compel the adoption of a like course in Europe, because nations burdened by the present scale of armaments could not long hope to maintain their place in the race with nations free of such load. Along this line Canada may do much to hasten the time when battle flags shall be forever furled and war drums shall no longer alarm. In promoting such action on the part of the Dominion each citizen may perform, in its highest and best sense, a really patriotic service.

"HARD TO IMAGINE."

# Training for Efficiency in Agriculture

G. M. FRIER, B.S.A., PURDUE UNIVERSITY, LAFAYETTE, INDIANA.

THIS continent to-day is witnessing the dawning of a new era in the development of the agricultural industry. The need of a more inviting, satisfying and permanent system of agriculture is manifest. The key to the success of this rural uplift movement is the training of our farmers and prospective farmers for the business of agriculture. The divising and operating of means for the attainment of this end is one of the problems on which some of the largest and broadest minds in Canada and the United States are working to-day. Formerly much was spoken and much was written concerning efficiency in the realm of morals, religion and general intellectual development as a factor in the making of a good citizen, a good mechanic, a good servant, but in this day of extensive division of labor and specialization, efficiency has come to be demanded and to a certain extent provided for and applied in every distinct line of legitimate human activity and endeavor. In the agricultural world the cry has gone forth for more life, more light, better men, better methods, larger and better crops, more profits from the business of farming. To satisfy this demand ample provision must be made and is being made for the educating of the farmer. For generations back it has been deemed necessary to fit a minister, a lawyer or a doctor for professional life by means of a college course of several years' duration. It is only in comparatively recent years that the necessity for the education of the farmer for his business has been strongly and generally felt, and in a measure provided for.

A BOY'S CORN CLUB.

The food supply was the first consideration of the first man and it must needs be an important consideration of our people to-day. The existence of a food problem and the necessity of a solution of that problem as it confronts us just now, is in reality the principle force which is moving thinking, far-seeing men to look after the development and conservation of our agricultural resources. For this great work of development and for the wise manipulation of the capabilities of the soil, for economic production, efficiency of a high order is demanded of farmers. There is no sphere of human activity in which mental equipment of a high order is more needed than in agriculture and in which an investment of brains will give a larger and more satisfying return. The time was when it was considered that if anyone of a farmer's sons was dull, and not likely ever to make a professional man, he would "do for a farmer." Such an erroneous notion is much less frequently expressed in these later days.

Other conditions have changed. In days long gone by the earliest settlers had merely to clear away the forest and tickle the soil with their crude implements, in order to make the soil yield bountiful harvests. No thought was given to the matter of keeping up the supply of plant food in the soil. When the soil on a given area was worn out, robbed of its fertility, the settlers moved further west, skimming and depleting the soil of its fertility as they went, till at the present time the limit of virgin agricultural soil has almost been reached. The result is, that we have now over a large part of the area of this country, to face the problem of building up comparatively depleted soils, maintaining them at that higher standard of fertility, and still profitably produce food, for a rapidly increasing population, and for the millions in other countries who are looking to American soils for at least a part of their food supply. Only a comprehensive knowledge of business

STUDYING CORN AT A FARMERS' SHORT COURSE.

principles as applied to the business of agriculture, a knowledge of soils, their origin, varieties, structure, life abounding in them, relation to moisture, heat and air, of the manipulation of soils so as to provide the most favorable conditions for plant growth, a knowledge of crops, their structure, adaptation to different types of soils and climates, their habits, their food requirements, farm animals,—breeding, feeding management, their relation to soil fertility, their economic production, farm buildings, farm implements, and a score of subdivisions of each of these and other similar topics, only a comprehensive knowledge of such things as these, a love for farm life, and the power to rightly apply knowledge, will make the efficient farmer, raise the standard of the agricultural industry and enable farmers to adequately meet the responsibilities that rest on them to-day, and that will bear upon them in a larger and larger way as time goes on.

It is a significant and striking fact that millers' associations, grain dealers' associations, bankers' associations, railroad companies, business men's clubs, manufacturers' associations, associations of educators, in fact leading public men everywhere, are recognizing the value to farmers, of an agricultural education, and many of them one way or another are lending encouragement and assistance to movements looking toward the educating of the farmer for his business. Farmers themselves are beginning to appreciate the fact that ignorance in regard even to the simpler scientific facts and principles underlying agriculture, is not bliss and prosperity, and that common sense dictates a getting into line with progressive, enlightened, educated leaders, a getting into harmony with the upward trend and spirit of educational and industrial life. The barriers erected by suspicion and scepticism concerning the results of scientific in-

AN OVERFLOW MEETING.

vestigation and experimentation, are fortunately giving way, as it is being demonstrated that new and better methods of farm administration, seed selection, crop rotation, soil manipulation, of breeding, feeding and caring for live stock and of marketing the products of our farms are giving vastly better results financially and otherwise than the haphazard, unscientific, antiquated methods of olden times.

Strong organized movements are on foot to acquaint the farmer with better methods of carrying on his business. This is not only a day of achievement on the part of investigators and experimentalists, but of opportunity for the farmer to become trained for efficiency in agriculture. In the second half of the 19th century a large number of our agricultural colleges and experiment stations were organized in response to the demand of some of our people for more light on farm problems. Light and truth came through the maintenance of institutions manned and equipped so that they might bend their energies toward a line of experimental work and a course teaching that private individuals could not accomplish. The result of the establishment of these institutions has been that a great body of most valuable knowledge concerning different phases of agriculture has been accumulated. This in a limited way is being presented to the people most interested in it, and in a less limited way is being accepted and applied by them.

It is now strongly felt that with the growing respect and demand for the information that our agricultural colleges and experiment stations have to offer, steps must be taken to go out among the people with the gospel of better agriculture, hold agricultural camp meetings as it were, reason with the people concerning a better system of agriculture, arouse enthusiasm, feed enquiring minds, and open up the way to our farmers so as not only to stimulate them to greater effort, but direct their efforts in promising channels.

A BETTER FARMING SPECIAL.

It is always to be borne in mind in this work that we have as yet only touched the fringe of scientific agriculture, that there are depths yet unfathomed, resources yet unexplored, methods yet untried. There is much truth in a remark of one of our prominent American educators: "When all other arts and sciences shall have been thought out and wrought out to their utmost limit, there will still in the realm of agriculture be boundless fields for work and research and reward. Humility may well be a charactertistic of workers of this generation.

Those who in addition to being investigators, would be extension workers, expositors of the findings of experimentalists, will find, if they look into the matter, that there is opening up on this continent, a large number of excellent opportunities for effective as well as remunerative work. The "show me" spirit is abroad among our people. This is a wholesome sign of the times. It is evident that our agricultural colleges can reach directly but a small fraction of our farmers, so that large sums of money must be applied to various extension movements having for their aim the going out among the people with men and equipment to demonstrate agricultural facts and methods and convince our farmers of the value of applying new and better methods to their business and so make of our farmers more efficient practitioners, and raise the standard of the whole vast industry on which such enormous demands are being made, and which promises to be more and more inviting and satisfying, financially and socially.

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## OUR HERITAGE.

Not all the fire of Burns, the mind of Scott,
The stern and holy human zeal of Knox,
Nor that wise lore which human life unlocks,
Of magic Shakespeare, Bacon's subtlest thought,
Nor Milton's lofty line sublimely wrought,
Nor Gentle Wordsworth 'mid his field and flocks,
Nor Mystic Coleridge of the wizard locks,
Hath power to raise us to our loftiest lot;

But that rare quality, that national dream,
That lies beyond this genius at its core,
Which gave it vision, utterance; evermore,
It will be with us, as those stars that gleam,
Eternal, hid behind the lights of day,
A people's best, that may not pass away.

—Wilfred Campbell.

# In Old Madrid

RAMIRO DIAZ, '12.

TO the visitor from the New World to the ancient city of Madrid, the most impressive feature is the Old World, almost archaic, atmosphere which pervades the city and its people. We feel that some centuries ago Spain fell asleep and that the people have been living in a long dream ever since. True, modernism is gaining headway in the Spain of to-day, and the commercial opportunities of the country are being slowly opened up, but above and beneath this, the spirit of old Spain still predominates and no where is this more evident than in the streets of old Madrid. In this short article I purpose to cherish the people and their costumes, rather than give a direct description of the city itself.

The people with their picturesque costumes and fine features have many good qualities of courtesy, self-respect and temperance, also such bad ones as the bloodthirsty love of bull-fights, which inspires even children's play, and glorifies swaggering matodores with a halo of popular renown. The women live in a degree of seclusion, little less than Oriental. The head of the family is always watching their movements. The marriage is more or less a matter of arrangement between the heads of families. So that when a girl wants to marry the lover of her own choice against the wish of her parents, she must employ as much ingenuity and display, as much daring as the prisoner who is trying to make good his escape from jail.

Madrid is the seat of effeminate and luxurious enjoyment of life and love. It is the seat of romanticism, the seat of Bohemian life.

Let us enter now into la "Bombilla" (This is a very popular restaurant). The theatres, moving pictures and music halls have closed their doors. There is a busy movement on the streets. It is 1 o'clock a.m. In this saloon there is a bar which is crowded with men. As you go on, you see little rooms, where they serve refreshments to parties of two or three, or more people. In these little rooms, a number of gay women are seated with men, drinking and eating, and singing to the sounds of the Spanish guitar. There Bohemians remain in the saloon until 4 or 5 o'clock in the morning, when they are taken away to their homes in hansoms, and luxurious cabs. Who are those people? Do they belong to the poor classes? Are they actresses, or aristocrats? They are both, actresses and aristocrats, who after the performances, come to these restaurants where they meet their lovers.

Another character you meet in the streets of Madrid are the "Gitanas" (Gypsies). They are in groups of four or five and they are about 17 years of age. They frequent the streets of Madrid under the superintendance of an old woman, for the purpose of amusing the people in the coffee houses and other public places by dancing to the sound of the tambourine which they accompany by songs and verses of her own extemporaneous composition. The people are very jealous. This mad jealousy was transmitted to them by the Arabians. Their whole life is consecrated to gallantry, which is supported by the spirit of chivalry. The beggars of Madrid are the proudest people in the world. They are always in constant apprehension of famine, but they never think of relieving themselves by labor. The principal study of their lives is to appear in a dignified manner before the world, by arranging their rags, in order to give the idea of a shirt and clothes under their cloak. This is an essential Spanish characteristic, and this applies not only to the beggars but to those people that once saw better times. The beggar considers himself as dignified as any of the grandees.

Now, I am going to speak about the city, itself. As everybody knows, Madrid is situated almost in the center of Spain, on the left bank of the Manzanares River. It is built on several low sand hills, on a plateau 2,450 feet above sea level, and is surrounded by a barren and extensive plain, treeless, and stretching northward to the snow-capped "Sierra de Guadarrama." The climate is very peculiar on account of its elevated and exposed situation. The climate is described in a Spanish proverb as "three months of winter and nine months of hell." The main streets are long, broad and airy, and bordered on both sides with beautiful trees and flowers of all kinds. They are distributed around the "Puerta del Sol" which is the center of the capital.

In the ancient times the city was surrounded by a wall of about twenty feet high. In this great wall there were five gates and eleven gateways. Actually the wall has almost disappeared, leaving three gates out of the sixteen. The streets are traversed by electric and horse car lines; are lighted by gas and electricity; and all the requirements of modern cities. Among the buildings I must mention the Royal Palace which is one of the most magnificent in the world. It occupies the site of the original Alcazar of the Moors. It is an architectural beauty, a combination of "Ionic" and "Doric." It contains a library of nearly 100,000 volumes, and a small, but splendid, Corinthian chapel. The armory is one of the finest in the world. In the city we have many and beautiful gardens, splendid agricultural buildings. Excellent shops are found in the "Calle de Alcate." The Royal Picture Gallery is considered by the highest critics in the art of Michael Angelo and Raphsello as the best in the world. It contains the collections of Phillip IV., Phillip II., and Charles V. There are also specimens of Titian, Raphael, Murillo, Veronese, Van Dyck, Rubens and other great painters. There are about thirty theaters, six rings for bull fighting which accommodate 15,000 people. Among the educational institutions we have a Botanical and Zoological Garden, the National Library, Academies of Fine Arts, exact Sciences, Legislation, Medicine, Surgery, etc.

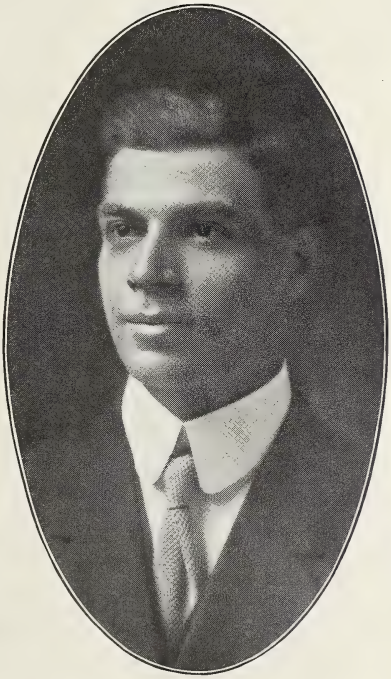
I would like to give you a better description of the beauties of old Madrid, but as the space is limited, I must say with the poet:

"The horrid crags, by toppling convent crowned,
The cork-trees' hoar that clothe the shaggy steep,
The mountain-moss by scorching skies embrowned,
The sunken glen, whose sunless shrubs must weep,
The tender azure of the unruffled deep,
The orange tints that gild the greenest bough,
The torrents that from cliff to valley leap,
The vine on high, the willow branch below,
Mixed in one mighty scene, with veried beauty glow."

# A Fifty Acre Farm

S. H. HOPKINS, '13.

PROF. DELA stated, in an address before the Farmers' Milk Congress, of Pennsylvania, that the great problem confronting the dairy-farm manager to-day was how to increase the profits per cow and per acre. I am going to solve that problem by adopting the soiling system, and doing away almost entirely with the pasturing system. The pasturing system of farming is, to my mind, the most extravagant system of farming ever invented. Let us see how it works. The stock are turned out in the spring. The pastures are good, and for a time they do well, but they trample and spoil as much as they eat. In a few weeks' time the pastures dry up, the flies become troublesome, the stock lose in weight, the milk flow decreases, and the profits are low. All this may be avoided by adopting the soiling system in summer, keeping the cattle inside in well ventilated barns, cutting and carrying the feed to them.



S. H. HOPKINS, '13.
Winner of Public Speaking Contest.

Thus we will be enabled to make one acre take the place of three or four under the old system; we can save building and maintaining nearly all interior fencing, we can save 40 to 50 per cent. of the crops by preventing the stock trampling and otherwise spoiling them; we shall get increased flesh and an increased milk flow, owing to the greater comfort of the stock; and last, but not least, we can increase the fertilizer produced on the farm by 300 or 400 per cent.

The buildings must be modern, convenient, well lighted and well ventilated. Good ventilation is absolutely essential, as I intend keeping the stock inside winter and summer, and the best of ventilation will be necessary under those conditions.

As regards stock, I would stock the farm with 24 milch cows, 6 two-year-olds, about the same number of one-year-olds, and calves, a pure-bred herd bull, two brood sows, and three horses, one of these being a driver and general-purpose horse. This stock, consisting of, say, 36 head of full-grown animals, will be kept the year round from the product of 35 acres. The rest of the farm, 15 acres or thereabouts, will be devoted to orchard, garden and grain crops.

This will necessitate the employment of labor. I would engage the services of an experienced teamster and a boy of about sixteen or more, besides unfortunately, having to work myself. I should aim to have a separate house built for the teamster, and engage a married man, as this is the only method to obtain steady, reliable farm help, and to keep it.

In laying out the work necessary to provide feed for the 24 cows and other stock. I would start with the autumn. In the fall, I would plow up nine acres and sow to rye and wheat, to provide early spring crops. Only about half of this will be required for feed; the rest to be plowed under. In the spring, as soon as the land is fit, four acres of the rye and wheat will be plowed under, and one acre sowed with barley, two and one-half bushels to the acre. At intervals of a week, the other three acres will be sown with oats and peas, three bushels to the acre, half and half. The rye will come in first, and be followed by the wheat, and the barley and oats and peas, are for feeding in July. For August feeding, three sowings of one acre each, with corn and sorghum, will be made during May, at intervals of a little over a week apart. Then as the oats and peas are consumed the land they occupied will be seeded to barley and millet for the latter half of September and October. As the corn is cut, the land it occupied will be sown with wheat and rye for spring feeding. Thus the summer's fodder is provided for from, at the most, 10 acres for 36 full-grown animals.

You will have noticed that I have not so much as mentioned alfalfa, and for this reason: It is altogether uncertain that there will be a patch of alfalfa of any size on the farm when I go onto it. But, if conditions are favorable, I will seed down 13 acres of alfalfa. Then this crop will take the place of many of the soiling crops mentioned, as it is undoubtedly the best soiling crop grown in Ontario. The 13 acres should provide 35 to 40 tons of the best hay, besides supplying green food in summer. Then, four acres will be devoted to growing root crops, and eight acres to corn for the silo.

The farm team in summer will go out in the morning, and cut sufficient feed with the mower to last two days. This will be brought home and spread on the barn floor. The cattle will be fed five times a day, and before each feeding the mangers will be cleaned out thoroughly. A cow will hunger in the midst of plenty, sooner than eat food that she has breathed on for a time.

If no orchard was on the farm, I would plant out five acres with apple trees, 30 or 40 feet apart. These trees will be well looked after, pruned and sprayed as often as necessary to keep them in thrift. This orchard, not being bearing, I will devote to sheep, stocking it with 24 ewes, and fattening their lambs there. One acre and a half I will sow with rape, and the rest I will seed down to grass, although I am well aware that this will be heresy to our horticultural friends. The rape will be fenced off, but a lamb-creep will be provided to let the lambs in; the young trees will have to be protected with wire netting. A rough shed will be built, in which the sheep will be fed winter and summer in racks. In summer they will get the same soiling crops as the cattle. A separate compartment will be made for the lambs, in which they will always find a supply of crushed oats, bran and oil cake.

The poultry will also be located in the orchard.

From five to seven acres will be devoted to oats, but it will be necessary to buy annually several hundred dollars' worth of concentrated feeds. This will build up the fertility of the soil, and be a good investment.

The milk will be obtained and cared for in as cleanly a way as possible. It will be separated on the farm, and the cream sent to the creamery. If the water on the farm is above 45 degrees Fahrenheit in temperature in summer, it will be necessary to put up about 30 tons of ice every year. The milk will be weighed, and a composite sample made up and tested every month. Thus, an accurate record will be made of each cow's performance. The heifers from the best cows only will be kept, and an endeavor made to build up a herd to average 400 pounds butter per year.

One thing I consider absolutely essential on this farm. That is, a tank for holding the liquid manure. I will have one constructed of brick or cement and allow the drainage from the buildings and the manure to flow into it. By doing so I will save fifty per cent. of the value of the manure, a proportion that annually goes to waste on the farms in Ontario.

In conclusion I will enumerate three points I consider essential: (1) the housing of cattle in summer with good ventilation and feeding them in their stalls; (2) the sowing each week in May, June and July, enough ground to last for one week; (3) the care of manure on the farm.

A BEAUTIFUL SPOT ON THE RIDEAU, NEAR KINGSTON.

# What We Owe the Pioneers of Ontario

E. LATTIMER, '14.

WE are told by what would seem almost unimpeachable authority that rural Ontario is to-day a land of neglected opportunity. Whatever may be our opinion of this statement there is one point upon which there can be but one opinion, one most pleasant task in which all can cheerfully join, and and that is, in paying tribute to the pioneers of Ontario, who have bequeathed to us as grand a heritage as was ever transferred from one generation to another.

Many as have been the blessing we have naturally enjoyed, from being a colony of the "greatest Empire that has been," still climatic conditions, remoteness from our markets, the geographical position of the province, and the natural topography of the country, presented obstacles to settlement only overcome by the very highest quality of citizenship. The manner in which those obstacles were cheerfully met, effectively grappled with, and eventually successfully overcome, is ample proof that the pioneers gave the best that was in them to this noble work.

If the struggle of the pioneers was hard, it was perhaps even harder for their wives and helpmates, to whom, in justice be it said, that Laura Secord, whose heroism it is proposed at this late date to fittingly commemorate, is a type, a specimen of our mothers and grandmothers, who, while practising great self-denial, and bearing their burdens with admirable patience and fortitude, built up that character and citizenship, of which Canadians are to-day so justly proud.

E. LATTIMER, '14,
Winner of Maple Leaf Public Speaking Contest.

Contrasting present day conditions, when trains and rural trolley lines carry rural scholars to colleges and our better educational institutions, when most residents of rural Ontario can converse with a neighbor, or summon a medical attendant, without leaving their own home, with the isolation, the bad roads, and the lack of comfortable means of travel and conveyance of earlier times, and consider the success achieved under such a serious handicap, it is a fair assumption that many as are the sins of omission we are to-day charged with, the principal one is the lack of appreciation and thankfulness for privileges we now enjoy, privileges won for us by the pioneers, who for a financial remuneration that prevented them from appropriating for themselves many of the good things of this world, not only laid the foundation of the present prosperity of this province, but also opened up that rich and prosperous West, which is to-day attracting emigrants from the best countries of the world.

Time will not permit us to dwell on the meritorious deeds of the individual settlers with the emphasis that their heroism would justly merit: suffice it to say that the pioneer who came from the old land when the ocean voyage was a matter of weeks, not days as at present, who entered the forest, and with the assistance of an axe and a few of his neighbors, built in a day a house, similar in architectural design and plan to that abode in which Abraham Lincoln spent his youthful days, found it no easy task to keep the wolf from the door, figuratively, as well as literally; the intervening years from then until now, have been, many of them, years of incessant toil, coupled with no small amount of hardship and privation, but to-day we have a province with an agricultural income estimated at $250,000,000.00; statistics also reveal the fact that there are approximately 175,000 farmers in Ontario; basing our calculations on these figures, we find the average income of the Ontario agriculturist to-day, considerably over $1,400; while all will admit that this is by no means a princely salary, still compared with pioneer days, it will almost justify the statement that the few pioneers who are still with us can to-day look back from Easy Street on the time when they made bricks in Egypt; best of all is the fact that they have achieved this degree of success by methods that will bear the closest inspection, something those engaged in some of our other industries could not say with truth. Sir John A. Macdonald said when he was first Minister of this Dominion, the farmers gave him the least trouble of any class: "They ask for nothing, and they received nothing," although this class of people have lately shown a slight disposition to awaken from their, in this respect, somewhat Rip-Van-Winkle-like slumber: still, that statement would be almost as applicable to-day as when first applied, for while our manufacturers have prospered under a protective tariff, and our transportation companies have prospered under the benign influence of an exceedingly benevolent Government, our pioneers owe the success they have attained largely to their own initiative, their energy and industry, ambition and determination.

"Those self-dependent powers that
time defy,
As rocks resist the billows and the
sky."

There has always been good blood in the rural population of the Anglo-Saxon race. They forced from the unwilling King at Runnymede, liberties that have been handed down to the present time; they have given a good account of themselves on many a hard-fought field; but no harder battle have they ever fought, no more glorious victory have they ever won than the battle they fought in transforming this province from the wilderness in which they found it, into the homes of luxury and affluence we now have, than the victory they won in, to a large extent, creating the prosperity we now enjoy.

And that prosperity is simply the prelude, the promise of greater things in the future; when we consider past agricultural accomplishments, and they have been by no means trivial, and also the fact that there is perhaps to-day no business, occupation or profession to which might be so appropriately applied that famous maxim of the late Cecil Rhodes, "So much to do, so little done." We are almost justified in claiming as wide a scope, and as grand possibilities for the Ontario agriculist, as that patriotic Yankee claimed for his countryman, when he said, "that his country was bordered on one side by the Aurora Borealis, and on the other by the Day of Judgment."

But we are told that rural Ontario is to-day face to face with a crisis, and even the most careless student of Political Economy will admit that there is reason for the statement; but if we shirk the responsibility that to-day confronts us we are unworthy alike of the heritage that is ours and of the race from which we spring. By accepting that responsibility cheerfully and enthusiastically is the way and the only way we can prove ourselves the worthy sons of those noble sires to whom we owe past accomplishments, present unequalled prosperity, and future apparently illimitable possibilities.

"IN THE GOOD OLD SUMMER TIME."

# The Apiculture Short Course at the O. A. C.

THE Apiculture Short Course, May 1-6, which was the first Short Course of its kind ever held at the Ontario Agricultural College, was a success.

In all forty-three bee enthusisasts were in attendance, including eight regular Apiculture students of Macdonald Hall, and six other ladies, from different parts of the Province. The counties represented in the entire attendance were the following: Bruce, Carleton, Dufferin, Elgin, Haldimand, Kent, Lambton, Leeds, Lincoln, Middlesex, Perth, Stormont, Welland, Wellington, Wentworth, York and the Province of Quebec. Nine of the sixteen Provincial Apiary Instructors were present, also Dr. C. Gordon Hewitt, Ph.D., Dominion Entomologist, and his assistant apiarist, Mr. Beaulne, of the Central Experimental Farm, Ottawa.

Apiculture Short Course, May 1-6, 1911.
Taking Winter Packing from Hives.

The programme consisted of forenoons devoted to lectures, the afternoons to demonstrations and practice, and three evening lectures of a more popular nature, copiously illustrated with lantern views. The weather being cold most of the week, the practical work took the form of demonstrations in the Apiculture Laboratory, doing such work as rendering wax from old combs, nailing up hives, nailing and wiring frames and putting in comb-foundation. A rather complete display of different kinds of combs which bees build, also of machinery used in the production of honey and beeswax attracted much interest.

Apiculture Short Course, May 1-6, 1911. Three Groups Unpacked.

By Thursday it was warm enough to visit the College Apiary. The hives were still in the boxes, where they had been packed with planer shavings for the winter. These boxes were taken off by members of the class and stacked, the shavings were removed and the class was given a drill on handling combs, and looking for different conditions of the internal economy of the hive. Friday afternoon was spent in a similar way, giving more attention to the symptoms of American Foul Brood. Saturday morning local apiaries were visited and some members of the class became discoverers of real cases of disease, much to their own satisfaction.

The lecture work was divided largely between Mr. Morley Pettit, Provincial Apiarist, and Dr. E. F. Phillips, Ph.D., in charge of apiculture for the United States. Mr. Pettit handled the more practical problems of Apiculture and Dr. Phillips discussed the question of general behavior, anatomy, and diseases of bees. Prof. Edwards introduced the subject of disease by a general discussion of the nature of bacteria. Prof. Harcourt demonstrated simple chemical tests for the purity of honey. Prof. C. A. Zavitz explained the work of the Ontario Agricultural and Experimental Union, and suggested ways in which it could serve the beekeepers of Ontario in addition to the work already done. Mr. LeDrew explained the principles of co-operation which might be applied to the business of honey production.

The evening lectures by Dr. Phillips on "The Behavior of the Bee," and on "The Hawaian Islands and their Beekeeping Industry," were largely attended by members of the Normal Teachers' Class, and students of the O. A. C. and Macdonald Hall. At the Friday night lecture President G. C. Creelman, B.S.A., LL.D., occupied the chair in his usual genial manner.

There were many expressions of appreciation from the members of the class as they dispersed to their homes on Saturday, May 6th, and several wished to know when the next course would be held.

Apiculture Short Course, May 1-6, 1911. Finding Foul Brood.

# Commercial Fertilizers; An Experiment in Hay Production

H. B. WEBSTER, '11.

IN older countries, commercial fertilizers have, for many years, been used in general farm practice, as well as for hay production, with marked results. In this country, however, their use has been confined to the growing of special crops. Before considering the advisability of their more general use, let us first briefly observe the circumstances which lead to their usage.

In uncultivated prairie lands the soil suffers no depletion of plant food. These virgin soils maintain their fertility, because of the decay of plants which grow upon them, and the death of the animals which feed upon the plants. In this way a large amount of organic material is collected at the surface of the soil, and this, when it decomposes—when it is called humus—plays a very important part in the liberation of plant food in the soil. In fact, an uncultivated surface becomes richer in plant food, besides that this decayed organic matter contains a large amount of nitrogen it also contains all the various ash materials which have been withdrawn from the subsoil by the deep roots of plants, and which are thus deposited at the surface of the soil.

When these virgin lands are brought under cultivation, the oxidation of the organic matter accumulated at the surface is greatly increased. Large amounts of plant food are thus brought into an available condition, greatly in excess of what the plants can utilize, and hence, larger amounts of the elements of fertility are lost from the soil in the drainage water. In this initial stage crops can be produced with very indifferent cultivation, hence no attempts are made to retain the great fertility of these virgin soils. The products of the land, both animal and vegetable are consumed off the land on which they grew, hence the larger the crop, the more is the fertility of the soil depleted. Often the one crop is grown on the same soil for many successive years. As time progresses the soil becomes robbed of its natural fertility, and refusing to produce profitable crops any longer, some artificial means of restoring this lost fertility must be secured.

It is true that most soils contain a large amount of plant food, but it is held in an unavailable state. Humus in the soil plays a very important part in the unlocking of this store-house of food supply, but, continued cultivation depletes the soil of its original supply of humus, and if none be added, the food materials must remain unavailable to the plant. In the harvesting of crops, a certain amount of plant food is taken from the soil, but under careful methods, a large share of this could be returned in the form of manure. However, large losses usually occur in the handling of the manure, and, at least, only a portion of the elements removed, can be returned to the soil. Thus we see that gradually, but surely, the productiveness of the soil decreases and finally to produce a maximum crop some artificial fertilizer is required.

It has long been recognized that plants require at least ten different chemical elements for their proper development. These are: carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus, iron, potassium, calcium and magnesium. Each of these elements has a special function to perform in the growth of the plant. Of these elements, carbon is by far the most abundant, usually comprising about one-half of the dry matter of plants. All the other elements are present in much smaller amounts. This is important as all the carbon in the plant is derived from the carbon-dioxide of the air. The hydrogen and oxygen are secured from the water and air, leaving a small amount of mineral matter to come directly from the soil. Repeated investigations have proven conclusively that of these mineral elements, those most liable to rapid exhaustion from the soil are nitrogen, potassium, phosphorus, and sometimes calcium.

Nitrogenous compounds in the soil are usually very soluble, and, not being held chemically by the soil, they are very readily leached into the subsoil. There is, however, another means of obtaining this element, nitrogen, in the soil, than by direct application. Humus is very rich in nitrogen and hence all organic matter supplied will increase its amount. The most important source is the use of leguminous plants as peas, beans, clovers, and alfalfa. These plants have the power of abstracting the uncombined nitrogen of the air by means of certain species of bacterial organisims, and storing it in the nodules in their roots, in a state readily available to other plants. Hence where these legumes can be successfully grown, the use of nitrogen ous fertilizer is limited, being used only for specific purposes.

Ordinary soils, as a rule, contain a sufficient supply of potash, being formed as they are from the original feldspartic rock. Potash in the soil is held firmly in double hydrous silicates, and iron and aluminium hydrates. It is quite difficult to bring these into a state available to plants, hence potassic fertilizers may often be used to good advantage. Again, there are soils particularly light and sandy soils, which naturally possess a comparatively small amount of this element, and to produce a crop on these soils, potash salts must be supplied.

Phosphates in the soil are usually found in the tricalcic form, and combined with iron and aluminium . Phosphorus is held very firmly in chemical combination, and is very difficult of solution. Usually it is present in the soil in sufficient quantity to produce a crop, but because of its unavailability, it is often necessary to supply soluble phosphates to secure a normal crop.

Calcium, in the form of lime is a very important factor in the liberation of plant food. Lime enters into almost every chemical reaction occurring in the soil, and as it forms so many soluble compounds, it is readily leached from the soil. Lime is also necessary in the soil to counteract the acidity, as an acid media is very injurious to bacterial development. Especially is this true after the turning under of green manure.

Of these principal elements of plant food one or more may be present in insufficient quantities to produce a full crop. The productiveness of any soil is dependent on the presence of sufficient quantities of all elements and is limited by that element which is present in relatively smallest quantity. Each element has its distinctive work to perform, and one element cannot replace another; an excess of one will not compensate for the deficiency of another. To supply these deficiencies, resort is made to artificial manures.

These so-called artificial manures are simply chemical or organic substances which contain one or more of these three elements of plant food, and which, when added to the soil, will enable it to produce an increased crop.

In order that a farmer may use commercial fertilizers intelligently and economically in the production of crops, he should, first of all, understand the needs of his soil; he should find out what his soil lacks. He must have an intimate knowledge of the food requirements of the crop which he wishes to produce; he must also know the best form of fertilizer to apply.

Be it here said that often the physical condition of the soil, and not the chemical, is at fault, when good crops are not produced. If land is wet and soggy, or if it be very close and heavy in texture, becoming very hard and dry in warm weather, good crops cannot be expected. The physical state requires first attention. Under drainage is the first requirement for many soils as it removes the surplus water, conserves more water for plant growth, deepens the range of roots, and lengthens materially the period of growth. The application of organic matter will greatly improve the mechanical texture of the soil, making it more open and friable. It also increases its water holding power, and ease of cultivation. The physical effect of lime also serves to improve soil texture ,counteracting the colloidal nature of the clay particles. Hence, before fertilizers can be profitably used, the physical condition of the soil must be suitable. The best results from fertilizers can only be obtained when combined with good tillage.

At the present time there are a great number of commercial fertilizers on the market, and before one can buy intelligently he must know: (1) the composition of the fertilizer; (2) the availability of its constituents; (3) the materials from which the fertilizer was made and how they were treated. A great deal of fraud is being practised in this trade and a buyer must always be on his guard against deceptions. The various kinds of fertilizers are too numerous to be mentioned in detail, but, be it understood, that, in the end, high grade fertilizers usually give better satisfaction.

The food requirements of various crops differ greatly. The science of chemistry comes to the farmer's aid in this connection. By a complete analysis of the whole plant, the amounts of the various elements required to produce that crop can be determined. It is necessary, of course, that there should be a larger supply of plant food than is actually required by the crop, yet this analysis will give a fair idea of the crop's requirements. In this connection must be considered whether the crop is grown for seed or for forage, the effect of the fertilizer on maturity of the crop, and its influence on succeeding crops.

Now, we come to the part of this work which is most indefinite, and which is most difficult to determine—the needs of the soil. The question is—how can one find what fertilizer will give him the best result? In this work the science of chemistry is invaluable, as in other cases. Is it not rational to believe that when a soil is analyzed, and the amount of plant food which it contains is determined, that by comparing these results with the food requirements of a crop, the deficiency of the soil could be determined.

It would seem at first sight that this method ought to yield very definite information to the user of fertilizers; but this is not the case. Both the previous history of the land and the method of analysis, influence materially the practical utility of the results of soil analysis.

The cause of the uncertainty of these results becomes obvious when we consider the three groups of substances in the soil. First, there is the insoluble, undecomposed rock material. This is of no direct value to the growing plant. The second group is termed the "reserve"; it consists of that portion not soluble in water, but decomposable by weak acids, as those exuded by the roots of plants. The third group consists of the "water-soluble" compounds—those which are dissolved in the soil water. Those are immediately available to plants.

The water-soluble compounds are rarely, if ever, present in the soil in sufficient quantities to produce a crop, hence the "reserve," or acid-soluble material must be looked to, to supply this deficiency. Some of this is brought into an available condition by the acids exuded by the roots of plants, and part by the natural process of decomposition of the soil particles. The availability of this material will depend largely on the nature of the soil, the previous cropping and the method of cultivation. In chemical soil analysis this reserve food material is brought into solution by the use of acids, but this does not indicate definitely what amount of it will be rendered available to plants during one growing season. Various strengths of extracting solution may be employed, thus giving great variety to the results secured from the determination of available materials. So far, it has been impossible to exactly imitate the solvent action of plant roots.

It is clear that the results of soil analysis are only comparative, and are not a true measure of the amount of plant food which a plant may secure in a given time.

There is, however, one way by which may be determined definitely the deficiency of any soil, and what fertilizers may be used on it with greatest profit—that is by actual experiment. This is the final test, and the one that is reliable above all others. Hence this is the method that was employed in this experiment.

Fertilizers have been applied to hay and pasture crops for some time. At first, ground bones were used. Guano then came into use, followed soon by superphosphates. For the last few years, particularly in the older countries special attention has been paid to the improvement of meadow and grass land. In Ontario, however, very little if any systematic work has been done. An endeavor was therefore made to secure at least comparative results from the use of various fertilizers, and to determine, if possible whether or not a more general adoption of fertilizers for these crops would be advisable.

Let us first consider the specific nature of these crops. The plants usually used for hay and pasture are timothy and clover. These are used as winter annuals, as they are sown the year preceding the one in which they are expected to produce a crop. These crops have a very short season of growth, hence must have a bountiful supply of available plant food early in the season. Following is the chemical composition of hay made from timothy and clover:

### Percentage Composition of Timothy and Clover.

| | Water. | Ash. | Protein. | Crude Fibre. | Nitrogen Free Ext. | Ether Ext. |
|---|---|---|---|---|---|---|
| Timothy .. | 13.2 | 4.4 | 5.9 | 29.0 | 45.0 | 2.5 |
| Clover ... | 15.3 | 6.2 | 12.3 | 24.8 | 38.1 | 3.3 |

Clover is much richer in protein, and also in ash and fat than timothy, but has less fibre and carbo hydrate material.

The following table gives the amounts of plant food required to produce a crop.

Amounts of various substance required by plants in producing a total crop, representing the demand made on the soil by the crop.

| | One Ton. Timothy Hay | One Ton. Clover Hay |
|---|---|---|
| Nitrogen ........ | 50 lbs. | 100 lbs. |
| Potash ........... | 65 lbs. | 80 lbs. |
| Lime ............ | 30 lbs. | 70 lbs. |
| Magnesia ......... | 13 lbs. | 25 lbs. |
| Phosphoric Acid.. | 16 lbs. | 20 lbs. |
| Other minerals.... | 100 lbs. | 25 lbs. |
| Total .......... | 274 lbs. | 320 lbs. |

Thus it is seen that in producing one ton of clover a greater demand is made on the soil, especially on the potash and lime. Be it remembered, however, that clover is a legume, and has the power of securing from the uncombined nitrogen of the air, not only its own requirements of nitrogen, but it stores up an additional supply in the soil.

In most crops only a small proportion of the total vegetation produced is lost to the soil if all parts not of direct value are left, and the manure is returned.

Table showing the quantity of various substances actually lost to the soil by the crop.

| | Timothy One Ton. | Clover One Ton. |
|---|---|---|
| Nitrogen ........ | 30 lbs. | 40 lbs. |
| Potash .......... | 34 lbs. | 40 lbs. |
| Lime ............ | 15 lbs. | 40 lbs. |
| Magnesia ........ | 7 lbs. | 14 lbs. |
| Phosphoric Acid.. | 8 lbs. | 11 lbs. |
| Other minerals.... | 60 lbs. | 12 lbs. |

From these figures we find that clover removes permanently more mineral elements from the soil, especially lime and potash, than does timothy.

When all the various conditions and circumstances that have been mentioned are kept in mind, we are in a fair position to discuss in detail the direct results of the fertilizer experiments carried out last summer on mixed clover and timothy hay.

The land on which the experiment was conducted was not in a perfect condition physically. The soil was rather close in texture and was underlaid with a very close compact subsoil. Surface drainage was good but under-drainage was faulty. The crop of the second preceeding season was barley, yielding forty-two bushels per acre. This was seeded with the following mixture:

| | |
|---|---|
| Red Clover | 8 lbs. |
| Alsike | 1 lb. |
| Timothy | 4 lbs. |
| Total per acre | 13 lbs. |

The new seeding grew well the remainder of that season. It wintered well, growing rapidly the following season, yielding two and one-half tons of hay per acre. During the following winter—the winter preceeding the experiment, the grass land suffered seriously. Much of the clover was killed out and the growth of the timothy was greatly checked. Not more than one-third of the crop was clover.

A sample of the soil was taken at the time of application of the fertilizers and analyzed.

Table showing analysis of experimental soil:

Experimental Soil.

| (1) Total Plant Food— | Per Cwt. |
|---|---|
| Moisture | 2.09 |
| Volatile matter | 10.0 |
| Insoluble material | 72.758 |
| Aluminium and iron oxide | 7.9625 |
| Lime (cal.) | 1.946 |
| Phosphoric acid (P2 O3) | .3125 |
| Potash (K2 O) | .4835 |
| Nitrogen | .3406 |
| Humus | 2 715 |
| (2) Immediate Availablity— | |
| P2 O5 | .240 |
| K2 O | 2374 |

From this analysis it is evident that the soil contains large amounts of plant food, especially of the most important constituents. The amount of humus, however, is low. Sufficient of the potash is immediately available, but the amount of phosphoric acid is low relatively.

The following is the physical analysis of the soil:

| Name— | Diameter in M.M. | Per cwt. |
|---|---|---|
| Clay | .0.005 | 18.25 |
| Salt | .005.05 | 51.10 |
| Very fine sand | .05.1 | 12.45 |
| Fine sand | 1.25 | 14.1 |
| Medium sand | .55.5 | 3.60 |
| Coarse sand | .5.1 | 0.50 |

This soil, though not containing a great amount of clay was yet very heavy in texture. This closeness of texture was increased because of compact sub-soil, lack of thorough under-drainage, and the excessive amount of moisture in the early part of the season. Yet this soil is a fair representative of the soils of the district.

The experiment consisted of ten plots, a series of five plots in duplicate. Each plot was two rods square, the area being one-fourth of an acre. The two series were some distance apart. The plots in each series were separated by a path of three feet.

The amounts of fertilizers used were as follows:

Plot No. 1.—Check plot, no fertilizer.

Plot No. 2.—Complete fertilizer; Muriate of Potash, 3.5 lbs.; Superphosphate, 8 lbs.; Nitrate of Soda, 3.5 lbs.

Plot No. 3.—Nitrate of Soda, 3.5 lbs.; Superphosphate, 8 lbs.

Plot No. 4.—Superphosphate, 8 lbs.; Muriate of Potash, 3.5 lbs.

Plot No. 5.—Muriate of Potash, 3.5 lbs.; Nitrate of Soda, 3.5 lbs.

The fertilizers contained the following amounts of plant food:

| | | |
|---|---|---|
| Nitrate of soda | 15.75 % | Nitrogen |
| Muriate of potash | 52.46 % | Potassium |
| Superphosphate | 18.20 % | P2 O5 |

---

| | | |
|---|---|---|
| Water soluble | 10.336 % | P2 O5 |
| Citrate soluble | 5.736 % | P2 O5 |
| Citrate insoluble | 2.128 % | P2 O5 |

All these fertilizers except one-half of the Nitrate of Soda of each plot were sown on May 13th. The remainder of the Nitrate of Soda was sown on May 21st. The fertilizers for each plot were mixed together with a quantity of soil, and distributed evenly over the whole plot.

At the time of sowing the fertilizers, the grass had made very little growth. The fertilized plots took the lead from the start, those on which nitrogen had been applied making most rapid growth. The plots were cut on July 10th, with the following results:

Table showing yield of plot and yield per acre in pounds:

| No. of plot. | (a) | (b) | Avg. | Yield per acre. |
|---|---|---|---|---|
| 1 | 63. | 62.5 | 62.75 | 25.10 |
| 2 | 96.5 | 93.5 | 95. | 38.00 |
| 3 | 99. | 94.5 | 96.75 | 38.70 |
| 4 | 80.5 | 71. | 73.75 | 30.30 |
| 5 | 83. | 74.5 | 78.75 | 31.50 |

It is quite evident that all the fertilized plots gave greater yields than the unfertilized plots.

The plots fertilized with nitrogen gave greater yields than the plots without it.

The plot fertilized with nitrogen and phosphoric acid gave the highest yield in both cases, even higher than those receiving potash in addition.

Now we come to the economic side of the experiment. Were the fertilizers applied at a profit or a loss?

Values were placed as follows:

Nitrate of Soda, $60.00 per ton.

Muriate of Potash, $50.00 per ton.

Superphosphate, $24.50 per ton.

Hay, cured, $15.00 per ton.

Table showing profit or loss from fertilizers applied:

| No. of Plot. | Yield. | Gain. | Per Cent Gain. | Value of Gain. | Cost of Fert. | Gain or Loss |
|---|---|---|---|---|---|---|
| 1 | 2510 | .... | .... | ..... | ..... | .... |
| 2 | 3800 | 1290 | 51.39 | $ 9.68 | $11.62 | —$1.94 |
| 3 | 3870 | 1360 | 54.18 | 10.20 | 8.12 | + 2.08 |
| 4 | 3030 | 520 | 20.71 | 3.90 | 7.42 | — 3.52 |
| 5 | 3150 | 640 | 25.50 | 4.80 | 7.70 | — 2.90 |

This table shows that all the plots, except one, were fertilized at a loss. There is, however, another item which enters into this consideration—the residual effect of these fertilizers on succeeding crops. On the plots to which the nitrate had been applied the aftermath grew much more luxuriantly than on the unfertilized plot, on which there was little growth.

## Conclusions.

1. All plots were materially helped by the fertilizers. Judging by the chemical analysis of the soil, it was not lacking in any of the necessary constituents. There was an ample food supply in the soil, but the plants were unable to assimilate it. The reasons for this were:

(a) Retarded growth of plants, due to the severe winter.

(b) Late cold spring.

(c) Lack of development of soil bacteria, due to the cold soil.

(d) Imperfect physical conditions of the soil.

2. Nitrogen was the most effective constituent. Nitrogen increases the growth of leaf and stem, and deepens the color of the foliage. This indicates a more active condition of the protoplasm.

3. Superphosphate was of distinct benefit. A soluble phosphate hastens growth, produces a stronger growth, and hastens maturity.

4. Potash was of no or little apparent benefit, as the soil was rich in this element.

Though the fertilizers increased the crop, yet because of the high cost of the fertilizing material, they were, except in one case, applied at a loss. Judging by this experiment, it would not be considered wise to invest heavily in fertilizers without further experimental evidence.

As the soil contains a large supply of reserve food material, the first attempt should be to bring this into an available state. By thorough underdrainage, addition of organic matter, and better cultivation, the physical condition of the soil would be much improved, and plant food would be liberated in greater amounts, so that artificial manures would not be necessary.

## O, SUMMER DAYS.

O, Summer Days, how shall we part?
To you I gave my inmost heart.
Swift to your call have been my feet,
I loved your raptures and your heat;
Your sunsets and your evening star
Have beckoned from their deeps afar.
Your winds have taught me to forget—
O Summer Days, not yet, not yet!
Your Veery's oft-repeated note
And Oriole's song I've learned by rote;
Your nights have filled me with content,
Your dawns were as a sacrament.
The silence of your forest ways
Has given peace to troubled days,
And all your lovely, leafy things
Have brought the joy a comrade brings.
Beneath your dome of tender blue
I've learned to measure life anew;
The absent hope, the lost desire
Urge me again to something higher,
And Beauty, with her mystic gleam,
Has waked again the old-time dream
And charmed away the vain regret—
O Summer Days, not yet, not yet!

# Fertilizing the Peach Orchard

The following is an extract from a Fourth Year Thesis, "The Peach in Ontario." The principles laid down apply to other fruits as well as to the peach —Ed.

### Manures.

(1). **Manure and Cover Crops.**—Cultivation is the cheapest and most valuable fertilizers at the disposal of the fruit growers. Orchards on sand loam soil have been known to produce good crops for six or seven years in succession without farmyard manure or commercial fertilizer, but they have always had a good supply of humus and thorough cultivation. The best cover crops are largely the same composition as farmyard manure, and with the exception of being unable to seed the soil with the organisms of decay, can take their place in every particular. The following is the chemical analysis of the three most prominent cover crops compared to farmyard manure. The figures show the percentage.

| | Nitrogen. | Phosphorus. | Potash. | Water |
|---|---|---|---|---|
| Vetch .. .. | .65 | .146 | .475 | 79.15 |
| Red Clover.. | .41 | .13 | .45 | 80. |
| Rye (green). | .33 | 1.5 | 7.3 | |
| Manure | .5 to .75 | .5 to .75 | .25 to .375 | |

Vetch and Red Clover are legumes and consequently take a large supply of their nitrogen from the air, and when they decay give it to the soil. Rye is not a legume, but has the power of breaking up, absorbing and making available a large quantity of potash. It supplies a large quantity of the much needed humus. Rye when left too long before plowing becomes tough and fibrous and does not decay readily, but if handled at the proper time is in no way objectionable.

As the table shows, any one of the three crops mentioned gives, when plowed under green, almost as much plant food, ton for ton, as the manure.

(2). **Commercial Fertilizers.** — Commercial fertilizers, without humus, have no place in orchard management and therefore must be used in conjunction with a cover crop or farmyard manure. True, nitrate of soda is readily absorbed without humus, but is the only fertilizer in common use that is absorbed by the plant in the state applied. The others, through the action of humus, must first undergo chemical change.

Potash is applied either as the muriate or sulphate, the former being in most general use though the latter is equally available. Phosphorus is applied in a number of forms, such as kainite, ground bone, Caroline rock, superphosphate, etc. The ground bone and superphosphate are best known. For quick returns, use the very finely ground bone or the superphosphate. The latter acts the quicker, but for prolonged returns the coarsely ground bone is best. It must be broken up before it becomes available.

LOW HEADED, WELL FERTILIZED.

HIGH HEADED, POORLY FERTILIZED.

The application of nitrogen in a leguminous crop is much cheaper than nitrate of soda.

(3). **Combinations.**—From data gathered this summer, 1910, the following methods of fertilizing are selected:

1. 10 tons farmyard manure at $1.50 .......... ......$15 00
2. 6 tons farmyard manure at $1.50 ..... ..... ...... 9 00
   200 lbs. bone meal at $1.50 per cwt..... .......... 3 00
   100 lbs. muriate at $2.15 per cwt. ...... .... ...... 2 15
   ———
   $14 15
3. 30 lbs. vetch at $6.00 per bu. 3 00
   200 lbs. bonemeal at $1.50 per
3. 30 lbs. vetch at $6.00 per bus. 3 00
   100 lbs. muriate at $2.15 per cwt. .... ..... ....... 2 15
   ———
   $8 15
4. 20 lbs. red clover at $9.00 per bus. ...... ......... ... 3 00
   200 lbs. bone meal at $1 50 per cwt..... ....... ...... 3 00
   100 lbs. muriate at $2.15 per cwt. .... .... ........ 2 15
   ———
   $ 8 15
5. 1 bus. rye at 95 cents per bus 95
   20 lbs. vetch at $6.00 per bus. 2 00
   200 lbs. bone meal at $1.50 per cwt. ...... .... ....... 3 00
   100 lbs. muriate at $2.15 per cwt. ................. 2 15
   ———
   $ 8 10

Any one of the above methods are recommended. Choose the one that suits your conditions best.

(4) **Chemical Analysis.**—The following is the analysis of the fruit, wood, and leaves from nine year old Elberta trees, showing the comparative amount of the fertilizer constituents removed by the different parts of the tree. Two other varieties, Champion and Hill's Chili, though not grown much with us

are given also. (Geneva Bulletin 265).

| | Total Weight. | Water. | Nitrogen. | Phosphorus. | Potash. |
|---|---|---|---|---|---|
| Elberta | ...249.64 | 201.29 | .473 | .151 | .424 |
| Champion | .190.03 | 150.04 | .633 | .130 | .668 |
| Hill's Chili | .251.08 | 203.69 | .757 | .175 | .714 |

Total weight included fruit, leaves, and new wood, and the results are in pounds.

The total dry matter removed on an average per tree was 45 25 pounds, distributed as follows:—

| | | |
|---|---|---|
| In the pulp........ | 17. lbs. | or 38. % |
| In the stones..... | 6.5 lbs. | or 14.5% |
| In the leaves....... | 16. lbs. | or 35·5% |
| In the new wood... | 5.5 lbs. | or 12. % |
| | 45.0 lbs | or 100.0% |

Each tree removed from the soil .6 lbs. of nitrogen, 19.3% of which was in the pulp, 4% in the stones, 67.7% in the leaves, and 9% in the new wood. Also each tree removed .15 pound of phosphorus, of which 42% was in the pulp, 5% in the stones, 44% in the leaves and 9% in the new wood. In potash each tree removed .6 pound, of which 49% was in pulp, 1% in the stones, 45% in the leaves and 5% in the new wood.

Any one of the five methods of fertilizing previously mentioned will replace in the soil the fertilizer removed by the crop.

A WELL-GROWN ORCHARD AT QUEENSTON.

# Improve The Corn Crop

CORN has a wide range of adaptibility. It can be grown throughout most sections of the country. Although not able to mature seed properly in the middle and northern sections, it produces a large quantity of fodder. No other grain that the farmer grows yields on a given space and with a given expenditure of labor, so much animal food, both in grain and fodder as does the corn plant.

It requires a warm soil and thorough cultivation and makes most of its growth during the hot months of summer and early fall. The requirements of thorough tillage brings many advantages to the soil not forced upon us in growing the other cereals. Furthermore, after a corn crop the soil should be in the best of condition for any crop which may follow.

Corn grain is one of the richest feeds obtainable by the feeder. It is the great energizing, heat-giving, fat-producing food for the animals of the farm. It may contain as much as 75 per cent. of carbohydrates in the form of starch and 5 per cent. of fat. Hence it is easily seen that the grain would hardly be suitable for young growing animals. It fails in furnishing the nutrients in proper proportion for bone and muscle building, since it is not rich in crude protein and mineral matter.

Grown for silage it cannot be equalled by any other crops. The succulence of the silage along with the actual food value, helps to swell the profits of the feeder. It has a great value for milk production, and successful dairying owes much of its success to corn, either silage or stover. Well-cured silage helps to keep up milk flow and flesh condition, when the hot suns of July and August have played havoc with the pastures.

In spite of the fact that we have numerous different strains and varieties, we are not reaping half the profits that the possibilities of this plant affords us. While improved methods of cultivation can be made to almost double the present yield per acre, the mere substitution of well-bred seed for the kind now generally planted, would on many farms, double the yield without in any way increasing labor or expense.

It is exceedingly fortunate that man has the power of modifying the growth of plants so as to adapt them to his needs. One who has succeeded in gathering a bushel of exceedingly fine ears might easily make the error of wishing that each kernel would produce an ear exactly like the one on which it grew. Such a law would make improvement impossible. Were there such a law of nature we would still be growing the quality of corn that grew a thousand years ago. But it is the tendency to vary which makes improvement possible. The tendency of seeds to reproduce the characters of the parent plants makes it possible by careful seed selection to augment desirable characters and render the plant more useful. This is accomplished by selecting seed plants that vary to the greatest extent in a desired direction.

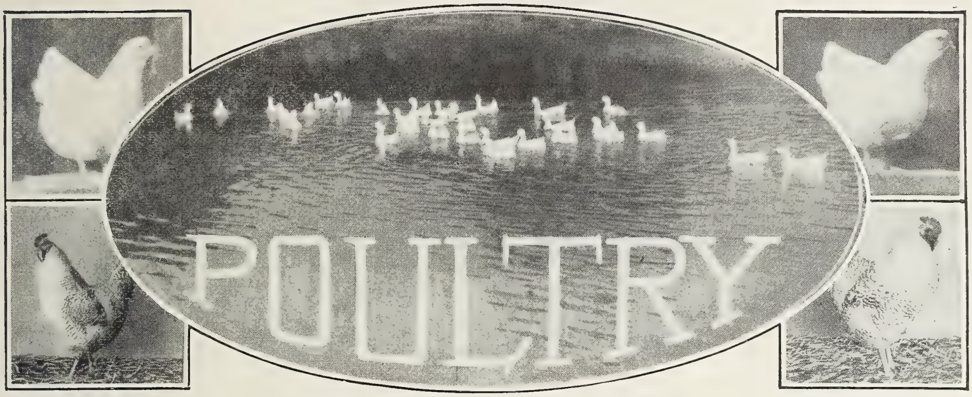
Corn is quite largely cross fertilized. A slight amount of self-fertilization occurs and comes about by the pollen from a tassel of a plant falling upon the silks of the same plant. This occurs to a greater extent with some varieties than with others. Experiments have demonstrated that with corn self-fertilization results in reduced production. Self-fertilization can be entirely prevented by selecting seed from stalks whose tassels were removed before the blooming period.

It is encouraging to note that when a seed ear is taken from a stalk possessing desirable characters that these characters commonly reappear strongly in the progeny. If the results obtained are not such as were desired it is because the breeder has failed to do his part. Failure to isolate the plot in which well-selected seed is planted may result in hybridization of different kinds or varieties and hence spoil the effects of seed selection. It has been found that plots of different strains must be separated at least a quarter of a mile.

The tendencies of the individual plant is the point worthy of notice. With corn these tendencies can be known only by observing the stalk, and seed corn cannot be selected intelligently and to the best advantage in any other way than from the standing stalks at ripening time. With corns producing but one ear per stalk some improvement can be made in productiveness and form of ear by giving attention to the ear only, but this is not advisable, as it may result in undesirable stalk characters. By selecting ears from standing stalks it is possible to produce a corn that will not succor unduly and that will have the desired number of ears per stalk. By selecting seed from the crib these features cannot be controlled.

Other things being equal, with kernels uniform in size and shape, straight rows contain the highest percentage of grain. Experiments have demonstrated that roughness of ear is strongly transmissable and that there is no correlation between roughness of ear and time of maturity nor between roughness of ear and productiveness. Depth of kernel is the character that decides more than any other the ratio of grain to cob. No ears should be used as seed that do not possess kernels of uniform size and shape, and long in proportion to the diameter of the cob. Kernels which are irregular in shape and not uniform in length and width should be discarded. Where the corn planter is used for sowing a more uniform stand of plants, and consequently a larger yield, is secured if the kernels are uniform in size and shape.

Yield of grain or stalk, according to whether the crop is for grain production or for fodder and silage, is the quality above all others which determines the value of a corn. A variety with uniformly well shaped ears, high percent of grain, etc., will not come into general favor with corn growers if it is not a good producer. However, these good points can be combined with high production, but the grower should score just on production, taking up the other desirable points as secondary features. It is a comparatively easy matter to produce a fine looking ear which will score well at an exhibition, but the same strain may be almost useless as a producer of large yields of either ears or stalks. The great scarcity of reliable sources from which high class seed corn can be purchased should stimulate numerous farmers in the sections of the country where the growing of seed corn is practised, to follow a good system of seed selection, so as to satisfy the demand from other districts which are dependent upon them. I. B. H.



# An Investigation into the Conditions of the Poultry Industry in Peterboro County

I. B. HENDERSON, '11.

### A Review of the Poultry Trade of Canada.

THROUGHOUT Canada towns and cities are increasing rapidly with a population of consumers, and it is in the farmers' interest to supply the wants thus brought to their own doors. One of these requirements, urgent at all times of the year, but particularly so during the holiday season, fall and winter, is poultry. With dressed poultry the seasons of supply and demand more nearly correspond than do those of the egg trade. Dressed poultry is more in demand during the fall and winter months and holiday seasons. The average farmer markets his poultry to catch the holiday trade, and it is left chiefly to the specialist to supply the regular trade, or to the dealers to hold sufficient in cold storage to meet this demand.

With eggs the condition is even worse. Production is greater than the demand during the spring and summer months, and fails to meet requirements both in quantity and quality during other seasons of the year. The flock on the average farm commences to lay in early spring and ceases usually in midsummer, with the result that during the remaining months of the year the consumer has to depend largely upon cold storage and pickled eggs to satisfy his wants. It should also be remembered in this connection, that with the increase of wealth, our population becomes more particular as to the quality of the products that they place upon their tables, and it is found that where No. 1 quality can be secured consumers are willing to pay top prices. The prices paid for poultry products today, compared with those of ten years ago, are double and yet the quantity produced does not seem to have materially increased.

During the season of 1909, Canada exported 552,850 dozen eggs, and imported 1,136,120 dozen, showing an excess of imports over exports of 583,270 dozen, with a value of $114,812.00. From this we conclude that the demand for eggs is becoming greater than the supply.

Our exports of eggs have decreased considerably during the last few years, as the following statistics compiled by the Dominion Department of Agriculture will show:

| Year. | Dozen. | Value. |
|---|---|---|
| 1899 | 9,632,512 | $1,267,063 00 |
| 1900 | 10,187,906 | 1,475,902 00 |
| 1901 | 11,363,064 | 1,691,640 00 |
| 1902 | 11,635,108 | 1,733,242 00 |
| 1903 | 7,404,100 | 1,436,130 00 |
| 1904 | 5,780,316 | 1,053,396 00 |
| 1905 | 2,601,427 | 712,866 00 |
| 1906 | 2,921,725 | 495,176 00 |
| 1907 | 2,591,205 | 556,557 00 |
| 1908 | 1,365,890 | 301,818 00 |
| 1909 | 552,850 | 124,315 00 |

"THE ORDINARY POULTRY HOUSE."

Our inability to supply the demands of the market at all seasons of the year, and also keep up our export trade is a very serious problem. Naturally we ask ourselves the reason for this. Surely with proper attention and the adoption of suitable conditions, poultry raising will be among the most profitable branches of farming to be followed by the farmer. I believe that the chief reason that there is not a larger quantity of poultry products produced in this country is, that the farmers do not consider it worthy of their consideration, but leave it to the women on the farm, without providing the necessary facilities and rations for the development of good poultry and lots of it.

**The Situation in Peterborough County**

To ascertain the exact conditions of the poultry industry, a survey was made in the eastern part of Peterborough County. As this part of the county is somewhat backward in its development and it not above the average of the province, the conditions as they exist here will apply to many other districts of the province.

The eastern part of the county is only medium in value from an agricultural standpoint. The soil runs light in some sections. The agricultural products as a consequence do not reach the height of production that would be possible were the soil heavier and more fertile. But this drawback is one of the most encouraging features for the future of the poultry industry in this section. The comparitively small agricultural production leaves a greater opening for some such industry as poultry, while the light porous soil of most farms makes it easy to have dry, clean quarters and yards at all times of the year. In fact, very few places were met with where stagnant water accumulated in the yards for any length of time, and very little disease was noticed in the flocks, though an occasional case of roup and tuberculosis was met with.

However, as a rule little interest is taken in economical egg and poultry production. The main idea seems to be to provide eggs and poultry enough for home use, with a little surplus for pin-money or to trade with at the local grocery store. A few, possibly 3% of the farmers, are pushing the business intelligently and economically, keeping good breeds, feeding carefully and keeping an account of their sales.

But in no case did we find that daily records of eggs production or feed used was kept. For this reason it has been difficult to get definite information relative to the progress being made in cheap egg and poultry production. The concensus of opinion seems to be that it will not pay to give more than passing attention to poultry, except to keep just enough fowl to dispose of the roughage, small grain, etc., on the farm, under the impression that the present prices do not warrant the expenditure of any more care and energy than is given at the present time.

### Breeds.

The question of breed receives practically no attention, except from the few who are interested in economical egg production. Below is given a summary of a number of farms selected as typical, showing size of farm, number of fowl kept, breed, etc.:

### Table No. 1.

### The Sizes of the Farms, Breeds, Number of Hens and Males kept and raised.

| | | | Breeding Stock | | Raised Yearly |
|---|---|---|---|---|---|
| No. | Acres. | Breed. | Hens. | Males. | |
| 1 | 83 | White Leghorns .... | 50 | 1 | 40 |
| 2 | 25 | No particular ....... | 60 | 3 | 50 |
| 3 | 100 | White Leghorns ..... | 40 | 3 | 45 |
| 4 | 200 | Wyandottes & Mixed.. | 100 | 3 | 90 |
| 5 | 200 | Houdans, mixed .... | 50 | 3 | 25 |
| 6 | 100 | Mixed .... .......... | 50 | 3 | 50 |
| 7 | 300 | Minorcas & Rocks... | 70 | 4 | 75 |
| 8 | 100 | Brown Leghorns .... | 125 | 7 | 100 |
| 9 | 100 | Brown Leghorns .... | 125 | 5 | 50 |
| 10 | 100 | Reds, Rocks & Leghorns .... ...... | 50 | 3 | 75 |

A glance at Table No. 1 shows that the breed most in demand is Leghorns. This can be attributed to the fact that the egg trade is the basis for the present status of the poultry industry in this section. In one case a distinct preference is expressed for the Rhode Island Reds, but the effect is being spoiled, as far as the future purity of the breed is concerned, by use of the Brown Leghorn cocks. The object in using these latter is to increase the summer laying, the Reds being considered good winter layers, and the Leghorns good summer layers. One case was noted where Minorcas were being discarded for Barred Rocks because the former had become run out. According to this table 60% of the flocks were mixed or of different breeding. From this table we see that there is kept as breeding stock one hen per 1-8 acres and that there is one per 2 acres raised annually.

### Table No. 2.

### The Number Out of the Ten Farmers Indicated in Table No. 1, who keep other classes of Fowl, and the number of such fowl kept and raised.

| No. | Acres. | Class. | Breeding Stock. | Raised Yearly. |
|---|---|---|---|---|
| 5 | 200 | Geese ..... ...... | 3 | 15 |
| | | Turkeys ..... .... | 5 | 40 |
| | | Ducks .... ..... .. | . | 10 |
| 9 | 100 | Turkeys .... ..... | 3 | 11 |
| 10 | 100 | Geese .... .. .... | 4 | 30 |
| | | Turkeys ..... .... | 3 | 20 |
| | | Ducks .... ..... .. | 4 | 10 |

A glance at this table will show that only three out of the ten farmers cited in Table 1, keep classes of fowl other than hens. Calculating from the ten farms represented there will be kept as breeding stock one turkey per 118 acres, one goose per 187 acres, one duck per 327 acres, and then there will be one turkey per 18.4 acres, one goose per 29 acres, and one duck per 65.4 acres raised annually.

### Table No. 3.

### Showing the Sizes of the Houses, Lighting, etc., in Relation to the Number of Fowl Kept.

| No. | Ft. Sq. | No. of Windows and Size. | | Nests. | No. of Hens |
|---|---|---|---|---|---|
| 1 | 20x12 | 2 | 20 inch. sq. | 5 | 50 |
| 3 | 20x12 | 3 | 2x1 | 6 | 40 |
| 5 | 10x15 | 1 | 14 inch. sq. | 6 | 50 |
| 6 | 20x12 | 2 | 2x2 | 4 | 50 |
| 7 | No house | | | | |
| 8 | 20x12 | 1 | 12 inch. sq. | 5 | 125 |
| 10 | 20x15 | 1 | 14 inch. sq. | 8 | 60 |
| 11 | 20x12 | 2 | 14 inch. sq. | 6 | 35 |

The poultry houses are as a rule warm and closely built. Probably nine-tenths of them are located in the barnyard. The remainder are in orchards, etc., at a distance of from twenty-five to fifty feet from other buildings.

The amount of floor space alloted to each bird varied from three to six feet, the average being about 4.8 square feet. There were no divisions in any of the houses; feed room, nests, roosts, etc., being in close proximity to each other. The buildings were all very poorly lighted. Eight square feet was the most window space in any building, and these windows were of such shape, or were located so high as to throw very little light on the floor; consequently the most of the houses were dark and forbidding, and unsanitary when the door was closed.

Over one-half of the houses visited had no provision for ventilation. In most of the others a small ten-inch chute through the ceiling answered the purpose. A few were of loose construction, with consequent drafts of air. Several were provided with sliding windows. Three of those visited had straw lofts. One was part of a basement stable with stone walls on three sides, and with long narrow windows eight feet from the floor. About one-sixth had earth floors, the remainder board. The nests were either on, or very near the floor, close to the roosts, and in most cases were in a filthy condition. None of the houses had been whitewashed or cleaned particularly.

The roosts were, without exception, built on the ladder style. The highest pole varied from five to as high as seven feet in one case, from the floor. The perches were made of 2x1 inch scantling, round poles, and 4x4 inch scantling. As a rule plenty of perch room was provided. In the case of No. 9, only 5 inches were allowed for each fowl, (Leghorns). Dropping boards were not used.

### Incubation.

In incubation, the general rule is to use the natural methods, but in two cases under observation 120 and 200 egg incubators are being used with good success, 57% and 74% being the respective hatches during the past season. These parties keep a non-sitting variety and claim that they have less trouble, even if they do not get quite as high a percentage of hatch. They do not experience any particular trouble in getting chicks mothered, and for that reason do not use the brooder.

Those who depend upon natural incubation either have a good sitting variety, keep a few hens of no breed or any breed in particular, for setting purposes, or else they raise very few chicks. As a general rule the hatching quarters are wherever it is most convenient, in the barn, root-cellar, or stables. The past season seems to have been extra good for high percentage of hatch.

Those who followed the natural system claimed a very low death rate among the young chicks, while one of those using the incubator lost over fifty per cent. of the chicks from white diarrhoea. No theories were advanced for the cause of this disease, and no preventative measures or remedies were tried.

As soon as the hatch was complete the chicks in every case were removed to a coop and fed at once. The food used was bread and milk, hard-boiled eggs, and later small wheat and buckwheat.

### Feeds and Feeding.

The standard poultry feeds are buckwheat, oats, wheat, and barley, and in the order named. Buckwheat, as a rule, formed the bulk of the ration, with such a mixture of the others as was found convenient. The practice is to feed twice a day in summer, and three times in winter. The food was thrown to them in such quantities as they were found to dispose of. No. 8 was in the habit of feeding fifteen quarts for the morning feed. The hopper method of feeding is not practised. Mashes are used fairly regularly in winter, being given in the evenings, and are composed of potatoes, crushed grain, bran, etc. Fresh water, and occasionally milk is supplied. Very little grit is used, but sometimes ashes and charcoal are placed in the pens and fed in the mashes. On the whole fowl are well fed, in one or two cases too liberal feeding has been practised, and the fowl becoming fat did not lay.

### The Poultry Trade.

The trade in live or dressed poultry is practically nil. No broilers are raised. The roasters are allowed to run with the rest of the fowl, getting the same feed, and in many cases are kept for home consumption. A very few consignments had been sent direct to produce firms in Peterboro and Toronto in early winter. The chicks that are marketed are not crate fed, nor even confined to a pen or coop and fed a fattening ration, but are allowed to run at large until good prices prevail, or until winter feeding commences, when they are disposed of to save feed and space, no matter what their condition. There is no discrimination on the part of the buyer as to quality. During the months of July and August some of the old fowl are disposed of. The current price this year being about ten cents live weight for these. Some of the buyers feed the birds a few days before they ship, but this is done only in the early part of the season before the fowl are being rushed to the market in large numbers. At present not more than one-fourth of the average flock is pullets.

### Egg Production and Marketing.

The poultry industry here depends almost entirely upon the eggs produced. The time of greatest production as judged from sales, is April, May and June, in the order named. The prices paid during these months range from 18 to 17 cents in April and May, to 17 and 16 in June, to 15 cents in July.

The average flock produced, as nearly as could be judged, about one egg per hen every two days during the months of highest production. The flock showing the highest average, produced during the month of April, 68 eggs per 125 hens per day. These results were calculated from the sales, and no account was taken of home consumption or breakages during the period, and it was not known that exactly thirty days production was being calculated, but the results are approximately correct. Production dwindles until early winter, when it ceases in most cases. A few have their flocks quit laying before the first of October, and depend upon them starting early in January.

The bulk of the eggs go to the egg-buyers, who keep wagons on the road in the summer, collecting from the farmer every two weeks. These buyers pay cash. They do not discriminate between large and small, clean and dirty, good and bad. Many of them encourage the marketing of eggs which they know are stale or perhaps rotten. One particular case was noted where a nest had been discovered in the harvest field. The eggs were observed to be stale, but the buyers insisted upon taking them along with those of better quality. Quite evidently the buyer was making his profit on the dozens, regardless of quality. A small percentage of the eggs are traded at the local grocery store during the summer, and all that are produced in the fall and winter are disposed of in this way. Cash is paid by these merchants, but they pay one cent more per dozen if the eggs are traded.

PEKIN DUCKS.

# THE O. A. C. REVIEW

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## Editorial

### Public School Education

The old system of Public School Education, now admittedly unsuited to the requirements of the agricultural classes, is passing away. As one evidence of this fact a visitor these summer days at the O. A. College would see the old residence and the campus brightened by the presence of the Normal School teachers, now taking a two-months course in Elementary Industrial Arts or in Elementary Agriculture and Horticulture. The first named course of training is designed for those who shall teach in graded urban schools and is based upon the theory that an efficient education is one in which the hands are taught to supplement the head. The object is to equip children in industrial centres with a knowledge of and a skill in performing, the operations carried on in the various manufacturing processes. The teachers are also encouraged to study the agricultural departments at the College and are expected to strive to impress upon the minds of their pupils the true dignity and the importance of the farmer and of the farm-life.

The course given in Elementary Agriculture and Horticulture is one vitally affecting the farmer's interests. That the present school system teaches the rural child very little that may be practically applied to his occupation, and that by leading directly to the High School and the professions it is a potent factor in depopulating country districts are facts well understood. In consideration of these faults this training for Normal School teachers who wished to teach in rural schools was inaugurated a couple of years ago. These are required upon returning to teach their pupils the simple principles of plant growth and cultivation and to instil in their minds a love and appreciation of the beauty of nature and of the farm. In connection with this department of the work, school gardens are to be conducted, thus teaching the child by concrete example rather than by book learning and further impressing him by his own work upon them. The principles of Horticulture, Landscape gardening, Soil Physics, Soil Chemistry, Entomology and Bacteriology are likewise to be discussed. The organization of Nature Study classes which are taught in the fields and woods is another important feature of this movement. The prime motive of this form of instruction is to make the child think for himself, thus eliminating the old methods of parrot-work, and to make him become deeply interested in topics pertaining to the farm.

The tendency is apparently to widen the scope of this teaching in all its branches, and it is to be hoped that it will so rapidly progress as to soon afford that full education necessary to the farmer's highest development. A groundwork in Animal Husbandry and Animal Chemistry, in farm operations generally, and in Co-operation and Political organization, it is to be hoped shall gradually be given to the country school child in the higher grades to fit him for the Agricultural High School. All praise and hearty best wishes for a great success to each one of those, this year within our halls, who shall engage in this noble work of education!

### The Athletic Department

The Athletic Department in this issue contains two articles which we deem well worthy of special mention. To the article written by J. Millar, our track manager, we are especially anxious to draw the attention of all track athletes. Mr. Millar is a strong, fast and capable runner, and his hints on training and running practices should prove of value to all who intend participating in the annual college field day events. As pointed out in this article, we have a new incentive, in the fact that our winning men will be allowed to compete in the 'Varsity sports, and thus may bring honors to our "Alma Mater." Read this article carefully; arouse yourself to your best, and come back prepared to do yourself and your college credit. For the article on that great English game "Cricket" we are greatly indebted to Mr. Wm. Hunt, who, in the midst of his spring work and handicapped by illness, prepared this article especially for this issue. We trust that it will prove highly instructive to all our readers.

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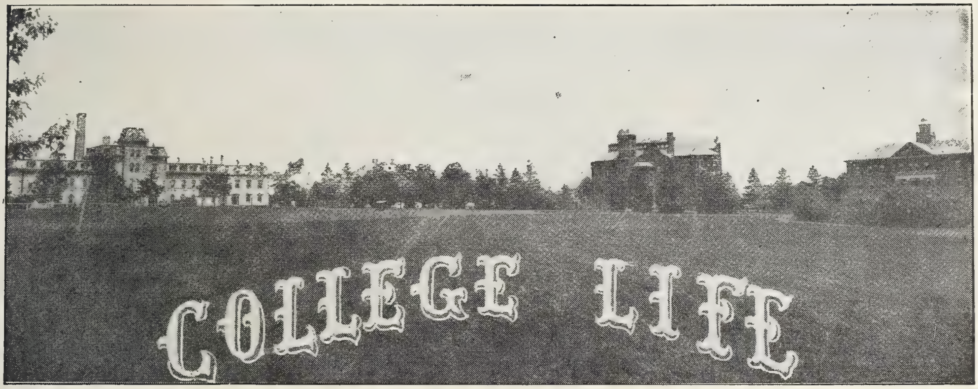

### Biological Club Banquet.

ON Thursday evening, April 27th, the Biological Club closed the present session with a banquet in the Kandy Kitchen. The present college year has been a most successful one for the above club, and judging by the enthusiasm shown the club, will continue to be of much practical benefit to those interested in biology and its allied subjects. Mr. Howitt presided in his usual able manner. Letters were read from former biologists, Messrs. Stafford, Thomson, Neville and Cutler, and the success already attained by these men is indicated of brilliant futures for the graduating biologists and their successors. It also speaks well for the high esteem in which the Biological Department of the College is held in this and the neighboring country. Brief addresses were given by representatives of the other departments, Mr. Jones' taking the nature of an address to the graduating class. Mr. Petch spoke on behalf of the next year's class and judging from his remarks the Biological Club of 1812 will repeat the successes of the one just closed.

### The Examinations.

When they are long passed and gone the exams seem trival. There are but few however who can look forward to them without a feeling of dread. Some there may be who even yet stand in awe of them, and shiver when they think of them as they would at the remembrance of some horrible nightmare. We are convinced that there are not many such in this institution.

To the philosophic student an examination is an important crisis. The course cannot continue indefinitely, and sooner or later must come the day of reckoning. Anticipating such an event, our true student looks to his position, organizes down his subjects, marshals all his mental forces and powers of concentration, and while carefully observing the common-sense laws of bodily health, absorbs facts and theories intelligently.. Thus he gains a comprehensive idea of each subject.

There are many who deal with the mass of facts which they have to absorb in a helpless and slipshod fashion. Every college contains a certain percentage of such men. They are too often out of their element and seldom make successful students.

As a test of character and capacity the exams are of inestimable value. They show to the close observer the disposition of each candidate. Some are cool and self-possessed, others are in a constant state of excitement. They show as nothing else could, the mental capacity of each man. They test severely the powers of tenacity or endurance and literally result in the survival of the fittest. In an indirect way they are a test of moral strength, but of that point we cannot at present speak.

For all years except the dignified seniors the crisis is now past. In many a quiet Ontario home and many distant parts of this vast country there are many anxious youths who will not experience peace of mind until the results are published.

We wish every man the success he deserves. It is painfully true, however, that miracles will not happen in examinations, and thus there will be a few who will experience the disappointment of failure. That man is to be admired who uses his opportunities, and does not court failure, but all honor to the student who rises above his defeats and keeps his eye steadfastly fixed on his ideal.

### The Sophomore Banquet.

In the Canadian Cafe on the night of April 12th, the class of '13 met together for the last time in their closing banquet. To many the orthodox banquet and more particularly its price, come as somewhat of a surprise. Yet this event will be a fond memory in later years, and those who were present will never regret the experience.

The surroundings were in many respects ideal; the open hearth with its log fire giving a home-like touch. A few of the more dreamy and romantic sophs quite forgot the purpose for which they had assembled, and were presently wandering through the fields of golden grain or underneath the whispering pines—which adorned the walls. These men were rapidly brought to their senses, however, by their more prosaic neighbors.

The company was in all respects distinguished, and apologies for absence were read from President Falconer, of Toronto University; C. C. James, Dept. Minister of Agriculture, and Dr. G. C. Creelman.

From behind a bank of exquisite flowers President Jenkins called on the Rev. Mr. Wilson to say grace and presently the banquet proper commenced.

The inner man being satisfied, cigars were lighted and the smoke curled upwards. Youths smoked who never smoked before, and perhaps many of them will never smoke again. When Mr. Dougall rose to propose the toast of Canada, chairs were pushed back and each face bore a smile of satisfied content. We cannot dwell on the measured eloquence of Mr. Dougall, nor the masterly reply of Prof. J. B. Reynolds. The toast list was as follows:

1. "The King." Solo, "All Hail, King George" ..- ..- ..- Mr. Harding
2. "Canada." Quartette, "O Canada"
   Messrs. Woltz, Harding, Fry, and C. L. Smith.
   Mr. Dougall. Prof. J. B. Reynolds.
3. "The Faculty"
   Mr. S. H. Hopkins. Dr. Hugo Reid.
4. "Our Alma Mater"
   Mr. H. M. King. Mr. G. H. Unwin.
5. "The Other Years"
   Mr. J. P. Sackville. Mr. Wade Toole.

In the speeches, wisdom and wit were freely intermingled, and it was noticeable that almost every speaker referred in glowing terms to the "angelic" behavior of the entire year ever since they had entered the institution. Dr. Reid, in a mirth-provoking speech, replied to the toast of the faculty. His story of the student "who put down the gelding as a good type of brood mare," brought down the house.

Mr. G. H. Unwin, the popular Dean of Residence, in a characteristic after-dinner speech, spoke of the more serious side of college life, and referred to the partings which are inevitable. Originality was the outstanding feature of a speech given by Mr. J. Eaton Howitt. He proved beyond a shadow of doubt that it is only the dull boys of the family who are sent to the city; the brightest members of the family being kept at home on the farm.

The speeches of the students themselves are worthy of comment. Of the stately eloquence of Mr. Dougall we have already spoken. A little kindly paternal censure on the part of Prof. J. B. Reynolds did not detract materially from the success of his efforts.

Mr. S. H. Hopkins, with his happy knack of coining phrases, dubbed his year "the angelic band." In his clear logical and yet humorous way he dealt with and disposed of, the faculty. In dealing with the ideal student he grew serious and even eloquent.

When Mr. H. M. King was called upon, the cheering was loud and long. for "Harry" is pre-eminently a humorist. His local hits, descriptive of his classmates and general impressions of his Alma Mater, were fresh and original. Mr. King will yet be heard from as a public speaker.

In his emphatic, decisive style, Mr. J P. Sackville dealt with the toast of "the other years." "John Percy" is a popular character. On all who had the pleasure of knowing him his society always acted as a tonic (both mental and physical).

In a masterly speech which was in all respects a credit alike to his training and seniority, Mr. Wade Toole replied for "the other years."

Mr. George Chapman, a guest from the city, having testified to the pleasure he felt in being present, the Rev. Mr. Wilson was called upon. His original bantering serious wit elicited a hearty cheer. His was admitted by many to be the speech of the evening.

A few announcements being made, President Jenkins rose to make his parting speech. In his modest unassuming way "Jud" bore testimony to the pleasure which it had given him to manage the affairs of the Sophomore Class, and referred to the support which he had always received from each member of the year.

If the year '13 were distinguished by little else there would still be left to it the charming personality of its President and his efficient management. He has few critics and no enemies.

The orthodox "national anthem" did not close the evening, for there was a general parting for the last time in the corridors and elsewhere. "When are you going?" "Where are you going?" "What are you going to do?" These questions passed from lip to lip, and fittingly so, for there has since been a scattering to the very limits of civilization.

Thus another Sophomore Class passes from the institution. Its members have passed through the two hardest years of their course, and learned their mistakes by hard experience. We trust it may be our privilege to shake many of them by the hand and again welcome them to college halls in September next.

### A New Appointment.

So attractive has the business of fruit farming become to Mr. J. B. Fairbairn, who was until quite recently Secretary of the entire college, that he has deserted the more sedentary office work and committed himself entirely to that calling. The last time we saw Mr. Fairbairn he was in the garb of the every-day tiller of the soil and wielded the shovel as if he had been at it all his life. His place has been filled by Mr. Gandier, a prospective graduate of class '11. "Cap" is a son of the parsonage, and is well liked by all his classmates. The appointment is a popular one, and we wish both men every success in their new spheres of labor.

### The coming of the Normal Teachers.

It is only a few weeks ago since the regular course students, playing hockey in the corridors and indulging in kindred amusements, spoke to each other of the days when they would pass from these scenes and their places be filled by fair damsels, the halls echoing back the sounds of girlish laughter. This dream has now become a reality, for the damsels have now arrived. They advanced on Guelph about ninety strong, armed with suit cases and every imaginable form of "grip." Some strayed into the Biological building in a vain hunt for the President's office, but the majority found their bearings at once, and settled down as sensible Normalites should. We will not call them school ma'ams. That title is undignifield, rural in its origin, and at all times objectionable.

Lacking a personal acquaintance with the fair damsels, we sought the estimable matron Mrs. Cunningham, and were directed by her to Miss Long, who is in charge of the 80 to 85 ladies and 4 men! ! ! (May the gods protect them) who compose this class. In a businesslike way this businesslike person, furnished the facts of the case, and they are these.

The central aim of this course is to keep the lady teachers from drifting into the blessed state of matrimony, rescue them from straying to that alluring wilderness called the Canadian Northwest, and at all costs keep them in Ontario.

To secure this state of affairs the Provincial Government is willing to do anything in reason. There are no tuition fees, board is free of cost, and reduced railroad rates can be procured. To those who complete the course, a diploma is granted, an increase of salary, amounting to $30 per year is forthcoming, and an additional grant of $70 is made to the school which they have charge of. Thus the Government seeks to settle the question and keep the girls at home.

To these fair students there are two main courses open. 1st, One in Industrial Art, comprising woodwork, drawing and cardboard work·

2nd, A course in Elementary Agriculture, including horticulture and nature study.

Prompted by curiosity and a feeling of personal interest we enquired of Miss Long, where the young ladies came from. "From all over Ontario," she replied, gravely. This was decidedly vague. But, we persisted, "are they handsome girls." "All girls are handsome," she replied with a smile, and leaving us to ponder over this final axiom, she departed.

We welcome this class of teachers to the Old Grey Residence building, as they are a distinct addition to the life of the college. Groups of them dotting the campus, add materially to the formation of a harmonious landscape, and it is refreshing to encounter groups of them in the residence halls, arm in arm, irresponsible, and as yet not quite sure of their whereabouts. We trust that after 10 weeks of basking in the sun and picking flowers they will go back to the grind of the class-room refreshed and strengthened, determined to be married just so soon as the first suitable man arrives, heedless of the artful devices of provincial or other governments.

### The Degree Exams.

In some of the universities of the Old Land the students speak of being "ploughed" in an examination. Scientists confidently affirm that during Degree Exams. the constellation of "the plough" hangs low over the university tower. The seniors should investigate this astronomical phenomenon. A few of our seniors are quiet, confident and exultant, while others show a state of nervous excitement which is commonly observed in the average freshman who sits for the exam. This bodes ill for their success. Certain others have a haunting sadness in their eyes which we cannot readily forget. There is such a thing as examination room repentance. We trust that not one of our worthy seniors will be reduced to this.

THE RIVER SPEED.

# Track Athletics

J. MILLER, TRACK MANAGER.

THE prospects of developing an exceptionally fine track team this coming fall are very encouraging. Not only have we material to make our competitors "step some," but we shall enjoy certain privileges heretofore denied. Owing to objections raised in certain quarters our men who qualified in the inter-faculty events were unable to compete under the Varsity colors at the Inter-Collegiate meet. The objections have now been withdrawn so that any O. A. College athlete winning first or second place on Varsity Sports Day shall henceforth be sent to contend for the Inter-Collegiate championship in his particular class. Moreover a programme shall be arranged this year, if possible, to considerably widen the field of authorized college sports. Last year an O. A. C.-McMaster out-door track meet was proposed by MacMaster University, and late in the season we were also invited to send representatives to compete in the annual Varsity 7 mile, cross-country run. Both of these proposals we were unfortunately compelled to turn down, but this year, we believe it will be possible to make satisfactory arrangements with these institutions. We should also like to have a regular programme of events inaugurated, such as medley, relay races, inter-year relay races, handicap races, etc., to be run in the intermission between the halves of each foot-ball game this fall. Thus when at the close of the season, our cross-country run is pulled off runners of every grade shall have had a chance of competing at his favorite distance. With these plans in view for this fall we think it not too much to request every field and track man to endeavor to train himself as nearly to perfection as possible and thus make the athletic season of 1911 memorable for the athletes who added glory to the old College.

One strong department of the track team will this year be the running section. There was a good deal of promising material brought to light last year, which a thorough course of training would develop into first class runners this season. To excel at this sport a persistent and systematic course of training is imperative, and it is the object of the writer to give, in this article, a few hints as to the nature of this preparation necessary to put our boys in the best condition for the fall races. There are various methods employed, but for the man upon the average farm the best one is the most convenient one. The early morning is perhaps the most suitable time, as it interferes less with his daily duties, and he is fresher and apt to put more spirit into the sport. The best form can be attained only by starting work early in the summer, but care must be taken to avoid over-exertion at first. A slow run of one or two miles with a sprint of 30 or 60 yards at the finish, every other day, is sufficient until the muscles become hardened. If long distance running is being aimed at the distance should gradually be lengthened, lung power and endurance being particularly aimed at in this case. If a middle distance form is desired the course should be covered more rapidly and the number of yards on the home-stretch steadily increased. Speed is a most essential point in every race and lack of it has often defeated the mile and two-miler. After coming in, a shower bath is very beneficial if it can be secured, but it shouldn't be long indulged in and no soap should be used. If a bath is taken in a tub, the body shouldn't be long immersed in the water, which should have the chill taken off but shouldn't be too warm. If a bath is not practicable a brisk rub with a coarse towel is a fair substitute. When preparing directly before a race and during the racing season a rub-down or massage is of great importance. A good rub is made of equal parts of alcohol and witch hazel. This should be applied freely to the muscles and thoroughly rubbed in

The question of diet is one of considerable importance, but needn't greatly concern the boy on the average farm as he can only get to eat what is eaten by the rest of the family regardless of its value from an athletic view-point. Plain, simple fare with an abundance of cool water, and a famine supply of pastry, prepared drinks, and tobacco is sufficient for his needs. At the College during the running season a radical change should be made, however, and we would strongly urge the athletes to combine in a request for a training table. Such a menu could be provided quite as cheaply as the ordinary fare, and with very little additional trouble, and it might mean just the difference between our winning and losing many events this fall.

Form in running is receiving a great deal of merited attention at the present time. There are distinct styles which may be practised with splendid results for various distances. One important feature of all races under the half-mile is the start. The best position for a fast start, now advocated, is as follows: hands resting on the ground with the thumbs and the tips of the fingers touching; feet about six inches behind hands, the left advanced with the chest tightly touching the knee. When starting from this posture leap forward for the first stride rather than upward and full speed may be gained in a very short distance. In sprinting care must be taken to run upon the toes, lifting the knees high and striking well forward. The head and shoulders should be thrown well back and the arms swung low and straight ahead. Never allow the arms to swing across the chest as it causes the feet to fall with the toes pointing outwards, thus losing an inch or more each stride—and races may be won by inches. In middle distance running a long even stride should be employed during most of the race, and the sprinting action used when making quick dashes ahead of opponents or in the final sprint on the home-stretch. This action should not be employed during the entire race as it is much too wearing and is certain to bring weakness before the finish. In purely long distance work a shorter, less tiring stride is necessary. The style is not here so important as strength and endurance

It is greatly to a runner's advantage to participate in as many events as possible, as valuable experience can thus be gained that can nowhere else be secured. Above all things an athlete should not admit defeat as long as he is sound and can stand and see. Finish gamely whether winning or not, for pluck has won more races than may be generally supposed. We are told that our sport is a hard, nervewracking one, and it is hard; but better be on the road training than propping up the walls of a local store or post office, swapping cigarettes and stories with other idlers. Maybe in some of the real scrapes in after life your opponents will recognize the perseverance and determination shown in the old days upon the O. A. College or Varsity oval. We trust you all may have a most successful summer and come back in September prepared to "clean up" and make our track team one of the best in Ontario.

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# Cricket in Canada: Its Progress, Prospects and Prestige

W. HUNT, LECTURER IN FLORICULTURE,

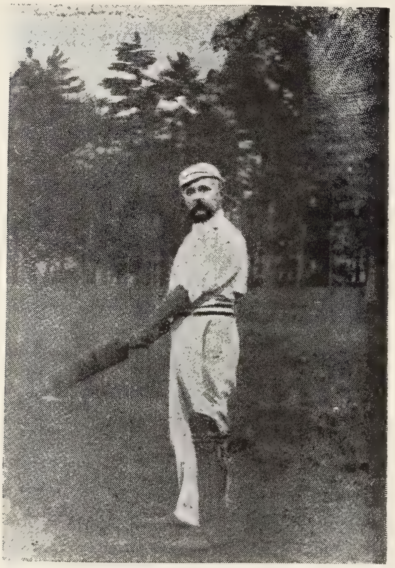
## Progress of Cricket.

THERE is no question but that the 'grand old game of cricket," as it has been most appropriately termed, is rapidly gaining in favor among all who are interested in out-of-door field sports. With our colleges, private schools, military and public institutions, it has for many years been the favorite summer game. It is only recently, however, that it has become more popular with the general public than ever before. In all parts of the country we hear of clubs and leagues being started. It is estimated that in and around Toronto alone there are some twenty-five or more properly organized cricket clubs, where only one or two at most existed some thirty-five years ago, when the writer first became acquainted with Canadian cricket. In fact, it was only in the large cities and towns mainly, and the institutions before named, that cricket existed at all at that time, with perhaps a few exceptions. Cricket at that period was on the decline in popularity, in many of the smaller towns and villages in Ontario, such as Brampton, Grimsby, Lindsay, Paris, Dundas, Cayuga, Niagara Falls, and many other places where strong clubs had existed for a number of years the game had died out, or at best was only played very occasionally. It is pleasing to note that in many of the places last named strong clubs are now in existence that can give a good account of themselves with any of the clubs from the larger cities and towns.

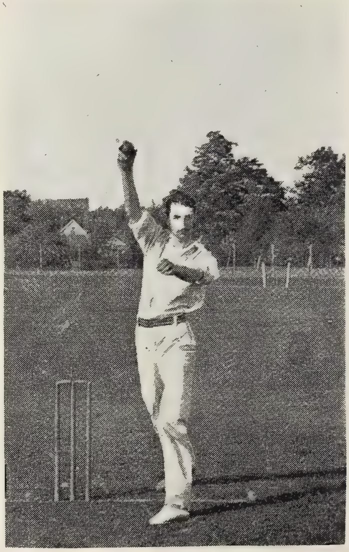
In connection with the progress of cricket and its increasing popularity, one feature is especially noticeable and pleasing, viz., that instead of cricket being confined entirely to the well to do class or those having a large amount of leisure time at their disposal as it used to be, it has taken hold among the artisan and mechanics, as well as the working men generally. As an instance of this, one might mention the clubs comprising the Church and Mercantile League in Toronto, where by far the majority of the active members are working men, or at least men who have comparatively little time to devote to cricket, except Saturday afternoon and general holidays. The St. George's Cricket Club of Hamilton might also be instanced. The St. George's Club (then known as the Albion Cricket Club) came into existence some twenty-eight years ago, the writer being one of three persons instrumental in starting it. This Club held its twenty-eighth annual meeting on the 28th of April and is making preparation for another busy season. It is worthy of note that it has never defaulted a game since its inception, a splendid record. Its membership is made up mainly of clerks, mechanics, and working men. Many other somewhat similar instances might be mentioned, but there are few clubs anywhere that can show a better record than the St. George's Cricket Club of Hamilton. Much more might be written on on the progress of cricket, such, for instance, as the successful trip of the Zingari Cricket Club to the Old Land last season where they upheld the honor of Canadian cricket by winning all but one or two of the series of games played against some of the best clubs in the Old Land, both in England, Ireland and Scotland.

GROUP OF O. A. C. (GUELPH) AND ROSEDALE (TORONTO) PLAYERS.

Although cricket has made considerable progress during the past few years, there is no disguising the fact that it is not as popular in Canada as the merits of the game deserve. In Australia, New Zealand, South Africa, the West Indies, and other colonies, it stands away ahead of all other outdoor field sports in popularity. It would be as well, perhaps, to inquire why it has not become more popular in Canada. In the first place the game as played when introduced was altogether too stiff, formal, and almost pompous in the manner it was played. Other objections were that it took too much time, and there was not sufficient snap in the game. There was a good deal of truth in these objections. By the introduction of Saturday afternoon matches and the game played in a less conventional manner, these objections have been very largely remedied. New rules are now being considered to still further improve certain features of the game in this respect. Another drawback was the difficulty in securing a good pitch for the wickets, the latter being a most necessary requirement to thoroughly enjoy the game. It is next to impossible in many places to secure a stretch of good tough turf or greensward suitable for this purpose. This difficulty is easily overcome by having a strip of cocoanut fibre matting which costs very little, and makes an excellent substitute for greensward for this purpose. Indeed in India, Africa and many of the hot, dry parts of Australia and even our own North West, cocoa matting is very generally used to secure a good pitch. By the use of this matting the game can be played on a clay field even, if the surface is only reasonably level, the ground for outfielding being of secondary importance to the pitch itself. These objections named, and the introduction of baseball, lacrosse, football, and other games at about that time, militated greatly against the progress of cricket and its popularity. Whilst not wishing to speak in any derogatory sense whatever of the games just named, I feel perfectly justified in saying that none of these games call into play the many qualifications of coolness, pa-



READY FOR A HIT.



OVER-ARM BOWLING.

tience, endurance, skill, and science, or have the moral influence that the game of cricket has. The games mentioned are all splendid games and easier understood and enjoyed by the unenlightened spectator than is cricket. To counterbalance this, however, they offer much greater opportunities for too much excitement and noise, elements that often lead the players on to rough, over-strenuous, and often brutal and degrading tactics in the game, that have in many instances not only been the cause of seriously injuring players, but have also in many cases proved fatal to the participants. These conditions should not be tolerated in connection with our sports anywhere, and everything possible should be done, especially by our athletic associations in connection with our educational institutions, to eliminate as much as possible any and all elements in sports generally, that do not tend toward creating the best of good feeling among its participants, whether as principals or spectators. Sports should be educative and have a good moral influence as well as being recreative and pleasing in their character, if not they will soon become degenerating, and a menace to the well-being of the whole community and nation. Cricket certainly offers fewer inducements for these objectionable features named than possibly any of our field sports. Cricket should be one of the games taught at all of our public schools, or at least should be encouraged as much as possible. It would

PLAYER READY TO BAT.

then soon have the moral influence in our sports that it has already in the sports in the Old Land and in all British colonies, as well as among all lovers of good clean, healthy, recreative sport everywhere.

### Cricket Prospects.

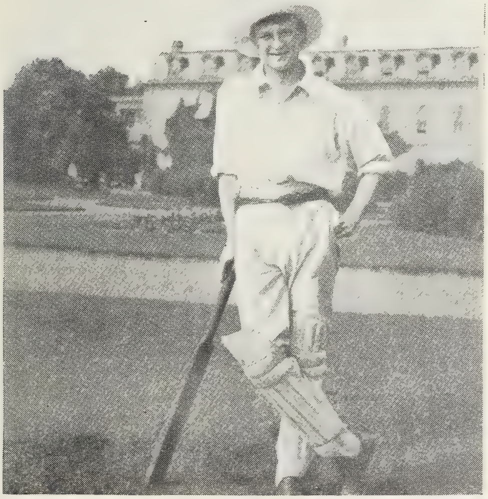
The prospects for the coming season's cricket are exceptionally good, especially from a local point of view. At the recent annual meeting of the Western Ontario Cricket League six clubs were represented as follows:—O. A. College-Guelph, Galt, Paris, Berlin, Waterloo, and Hespeler clubs. A series of twenty or more games will be played between these clubs, beside the finals. The splendid silver trophy presented by members of the League four years ago was won for three successive years by the O. A. College-Guelph club, when it became their property. This trophy was on exhibition with the other College trophies for a year or two in the Massey Hall until last fall, when the Galt Cricket Club succeeded in wresting it from the local players after a close and exciting series of games. The home club here decided to put the cup up for competition again, so as to stimulate interest in the game, so Galt now has possession of the trophy. The first home game in the league series will be played on the College campus on Saturday, June 17th, with the Galt club. Beyond the league games, home and home matches have been arranged with the Hamilton Cricket Club and one or two Toronto teams as well as with other clubs.

The Ontario Cricket Association has plans already mapped out for a busy season. A cricket tournament lasting a week will be held in August in the City of Toronto. Many of the games scheduled for this meeting are of quite a national or international character, as well as of local and provincial interest. Not the least interesting among the series of games at the tournament is the proposed one between a team of veteran players of Toronto and a team of all Ontario veterans. Visits from prominent clubs from the neighboring republic are also in contemplation at the tournament. The increasing interest taken in the game between the Church and Mercantile teams in Toronto has aroused the cricket spirit to an intense point, and has done much to popularize the game among the industrial classes of the people. These and other instances of the progress of cricket that might be mentioned, all indicate increased interest in the game in the future.

Another very important factor that will have a great influence on cricket is the starting of juvenile cricket teams in various places. It is no uncommon sight in many parts of the country to see the game being indulged in by young people where a few years ago even the name of cricket was scarcely know, much less played. This augers well for the future popularity of the game, as without the introduction of young players, cricket will never attain universal popularity. Our colleges and public institutions together with the influx of players from the Old Land have hitherto been the main sources of supply to keep the ranks filled up. But these alone will never make the game universally popular, our young people generally must take a liking to the game. The suggestions made in this paper may possibly have some influence if carried into effect in the true spirit of sport.

### Prestige of Cricket.

That cricket is one of the most manly, scientific, and sociable games cannot be gainsaid. The tenets and requirements of the game are such as to induce a true manly spirit of sport, a spirit of fair play and honor, that is unfortunately none too apparent in many of our field sports of to-day. It is a game that requires a larger measure of self-reliance, self-control, and patience than perhaps any other outdoor game, whilst it affords ample and sufficient exercise and pleasure as a recreation without giving the opportunities for the uncalled for strenuousness and roughness that is all too apparent in many of our games. Another great point in favor of cricket as compared with many other games is that anything pertaining to hoodlumism seems quite out of place and out of keeping with the true spirit of fair play that cricket inspires. Again, owing to the glorious uncertainty of the game, it is impossible to introduce gambling or betting to any great extent in the game, as the poorest man on the team and the last man to bat, may possibly make the highest score in the match. In short, cricket is a game of high moral and social status, a game replete with manly and scientific requirements on the part of the players, without the altogether too many objectionable features such as gambling, rough play, over strenuous, unduly exciting, and in some instances degrading features that are too often connected with many of our out-of-door sports. The inducements to such as these are utterly foreign to the true spirit of the game of cricket. Discipline is another great feature in the game. One rarely, if ever, sees or hears of the unseemly demonstrations against the ruling of the umpire or referee so common in many other games, and that often take away so much of the pleasure that could otherwise be obtained by spectators at games. It



"A CRICKET ENTHUSIAST."

has been said by an old writer "that the field of Waterloo was won on the playgrounds of Eton," and there is no doubt but our sports and the feelings inspired in our sports are great factors for good or evil in the events of everyday life, both of individuals and of nations. There is no out-of-door game that has more moral influence or where the qualifications of a good player, such as the possession of a good equable temper, a quick eye, a clear head and a firm hand, are needed more than in the game of cricket.

An old and venerable philosopher when asked his opinion of sport in regard to individuals, said, "Show me your people at their sports and I will tell you their character." There is doubtless a great deal of truth in this statement. Nowhere can as good an index of the temperament, disposition and character of a people be learned than in watching them at their sports whether as spectators or principals. It behooves us, then, to try and instil into our sports a true spirit of honor, manliness, and fair play, and expel from them anything that tends to lower or detract from the influence for good, they should have. Then and then only will our sports be what they should be, not only recreative and pleasing, but morally and socially uplifting in their character to both players and spectators, and an element for good among our people.

The following lines, written from memory, on the game of cricket, are given with apologies to the author for my incorrect quotations:—

"Life, is like a game of cricket,
  Man's the player tall and stout,
Standing to defend his wicket
  Lest misfortune bowl him out.

The field's the world in which we wage
  The transient warfare of our strife,
Where hand to hand we all engage
  To fight the battles of this life.

But as in cricket, friendships bind
  Opposing interests in the game,
So in Life's drama, should friendship find
  A place, to follow on and do the same.

So keep your arm and eye both steady,
  Watch your chances one by one,
To score a point be always ready,
  Yet be careful ere you run."

# Home Economics as Related to Institutional Housekeeping

THE demand for well-trained housekeepers is a large and increasing one. They are needed to fill administrative positions in institutions where large numbers are housed and fed, and where competent supervisors are required in providing supplies. Economy in purchase, storage, preparation and service are desirable wherever groups of people are living together, under more or less uniform conditions. Cleanliness, which is truly applied hygiene, not merely the following of tradition, is vital, and if the problem is to be rightly solved age, sex and activity must be considered in fixing upon food supply.

To do these things and have a pleasing dietary is no easy task, but it can be done. Here, as in other matters, both knowledge and wisdom are needed. Knowledge can be gained and experience will teach wisdom.

As a preparation for this pursuit, the student must be put in possession of such knowledge as will be useful and readily available. The perceptive powers must be trained to accuracy, and alertness, and the judgment and reasoning powers well developed. The end sought—complete efficiency in human beings—raises the business and profession of housekeeping to a plane far removed from drudgery.

The profession calls for women of native executive ability, mature experience, social aptitude, good judgment, promptness in meeting emergencies, and sound, common sense. It is clear that many of these qualities must be contributed by the individual. They cannot be secured by any fixed course of study in college. On the other hand they may be developed by wise tuition. This has been the purpose of the various courses in household management hitherto provided.

The principles of institutional housekeeping have much in common with the administration of the private home and the student may profitably follow courses in Household Economics as a foundation. But the perusal of the columns of "discoveries" in a magazine devoted to the interests of the household show clearly that devices which are useful to the individual will not serve in the hands of a changing body of paid servants. The equipment of the institution must take into account carelessness in handling utensils, the rapidity of service, and congestion at times of greatest pressure, all of which increase the probabilities of breakage. The equipment then must be fitted to the usage attending these conditions or be frequently renewed. The question is not simply what equipment is immediately attractive and supposedly serviceable, but what equipment will meet the demands of this particular institution with the most satisfaction and least expense.

Then the menu provided for a private family, which are toothsome and aesthetically attractive, as well as efficient, as to dietary are often costly in expenditure of time. Such expenditure is not, as a rule, estimated in a private family, as it is freely given out of the time and thought of the homemaker. The institution must pay for such provision and it requires a wise head to apply the household experience in a manner that will secure efficiency and attractiveness with the least possible outlay of time and money.

QUALIFIED HOMEMAKERS.

It is very necessary for the professional housekeeper to understand food questions from the point of view of nutrition, economy and attractiveness. She should be a student of dining-room and kitchen service, and incidentally a student of the psychology of those who eat and those who serve.

Again, some believe that most colleges in the near future will direct and own their own laundries and that this natural field for women, which is fast becoming thoroughly scientific, will attract some of the best trained minds.

These examples will serve to show that the special training for professional housekeeping embraces every department of Home Economics. The need for women with good home experience and a reasonable share of native executive ability is urgent. To such women who can and will so direct their lives, the call comes to enter a life which leaves little time for self interests, but is full, stimulating and useful.

J. E.T.

# Among Ourselves

## Reception for O. A. C. Normals.

An innovation was made in the social life at Macdonald when the Seniors of 1911 held a reception for the Normalites who had recently arrived to take up their ten weeks' residence at O. A. C. Hitherto this body of students has come and gone and the Macdonald girls have given no hint that hospitality is included in the scope of Home Economics; the Jews have had no dealings with the Samaritans.

No one could charge the Macdonald people with indifference this year, every guest was announced by an imposing Ethopian footman, and each of the thirty hostesses shook her warmly by the hand.

The programme arranged for the visitors' entertainment in the gym. was an amazingly varied assortment of original stunts privided by the different classes, there was much that was spectacular, much that was beautiful, much that was grand, and enough that was funny to give a genuine zest.

The audience were given an opportunity between the acts to regale themselves with the delicious refreshments and to admire the portraits of the evening's stars displayed about the corridors.

RECRUITS FOR THE CANADIAN NAVY.

Fortunately the electrician had been prevailed upon to extend the lighted period for one precious hour, and thus both entertainers and entertained succeeded in reaching the privacy of their own rooms before the tables and chairs, which inevitably spring up under the cloak of darkness, arose to smite them.

### O. A. C. Defeated.

The baseball season for 1911 opened on April 11, the first game resulting in a decided victory for the Mac Excelsiors against the O. A. C. Giants. Score 23-13.

McNair made two triples and a single, driving in one run and scoring one herself. Poor baserunning kept down O. A. C.'s score. Watts pitched too well for the Giants to make much headway. The weather was uncomfortably cold for those in the grand stand. The exhibition game, scheduled for the 29th, had to be posponed on account of the rain.

## Much Ado About Nothing

Miss Gr-nwd—I myself was raised on hard wood.

We have never heard this recommended in any of our dietetics lectures, but it is worth looking into.

* *

A whistling boy with a shiny pail
Came ambling gaily through the dale
To where a cow with a brindled tail
On nice green grass did herself regale.

A bee lit into the cow's right ear,
She lifted her heels in the atmosphere,
And through the boughs of an old oak tree,
The boy sailed into eternity.

* *

Burser (to whom Miss (?) is paying her board)—Single (room of course)?

Miss (?)—Yes, unfortunately.

* *

Miss J. L. R.—Say, how do the study apiculture anyway? Where do they get the apes?

Mary had a little lamp,
It was well trained, no doubt,
For everytime that John came in
The little lamp went out.

* *

### At the Cooking Exam.

M. C. (presenting a soggy little omelette wrapped up in paper)—I couldn't remember what it was that should be rolled in paper, but I knew something should, and I wasn't going to take chances. I was working for marks.

* *

Cooking Teacher—What are the variations of standard cake.

Miss McK.—Why, un—er—chemis.

She hadn't many ideas, but those she had were good ones.

* *

Miss N. L. B.—Wading through the fishworms after Tuesday's storm, gazing heavenward—Where do those worms come from, anyway?

# Schools' and Teachers' Department

**Devoted to those interests of the Ontario Agricultural College which pertain particularly to the training of teachers for giving instruction in the schools of the Province along vocational lines—in Home Economics, Industrial Arts, Elementary Agriculture and Horticulture.**

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## ELEMENTARY AGRICULTURE.

TEACHERS' SCHOOL GARDENS—TEACHERS' NORMAL CLASSES, O. A. C., SPRING TERM, 1911.

**Teacher Training in Elementary Agriculture and Horticulture at the Ontario Agricultural College.**—With the establishment of the Macdonald Institute at the Ontario Agricultural College in 1903 the work of teacher-training was systematically begun. For three years the classes entering for the work were composed of selected teachers, sent from the five Eastern Provinces of Canada, under a scholarship arrangement made between Sir Wm. MacDonald and the several Departments of Education. For the past three years the classes have been composed of Ontario teachers who elected to take the course after their graduation from the Normal Schools at Easter.

The scheme marks a rather interesting experiment in practical pedagogy. The teachers entering, in consideration of having their expenses met by the Government, agree to teach in the schools of Ontario for a period of three years and "so far as opportunity enables them, to give instruction along the lines of their special training." In case of non-fulfillment of the agreement they undertake to repay the Government $15.00 for eacch year of the unfulfilled term. For carrying out the experiment, the Agricultural College for a period of ten weeks is turned into a Teachers' College. Its teaching staff and equipment is put at the service of the cause of agricultural education for the public schools; the Departments of Education and Agriculture co-operate in a common cause of enhancing the value of the instruction imparted in the rural schools.

The class of 1909 had ninety-seven teachers enrolled; last year there were forty-one in the class, and this year there are eighty. All the Normal Schools are well represented. Sixteen are from London, eleven from Stratford, fifteen from Hamilton, ten from Toronto, four from Peterborough, eighteen from Ottawa and five from North Bay. Miss Barker is a teacher in an Indian School at Hudson Bay. All parts of Ontario are represented in its personnel, which is as follows: 1. Allan, Helen B., Rylstone, Northumberland Co.; 2. Alves, Ruth I., Carling, Parry Sound Dist.; 3. Anger, George N., Walsingham, Ctr. Norfolk Co.; 4. Armstrong, Annie, Clarksburg, Grey Co.; 5. Armstrong, Eva E., Mt. Forest; 6. Armstrong, Violet B., Brockville; 7. Avery, Maude, Junetown, Lees Co.; 8. Baker, Etta, Collingwood; 9. Barker, Lucy, Fort Albany, James' Bay; 10. Bearss, Lillie, Aylmer; 11. Bicknell, Lena, Dunnville; 12. Binnie, Elizabeth, Bunessan, Grey Co.; 13. Blackburn, Agnes C., Middleville, Lanark Co.; 14. Bowman, Agnes, W. Toronto; 15. Boyce, Norman R., Blake, Huron Co.; 16. Brown, May E., Greenwood, Ontario Co.; 17. Cameron, Anna W., Thamesford, Middlesex Co.; 18. Countryman, Hazel B., Bush Glen, Stormont Co.; 19. Davey, Freda B., Cedarville, Grey Co.; 20. Delahunt, Beatrice B., Moorefield, Wellington Co.; 21. Drever, Annie B., Collingwood; 22. Edmiston, Myrtle, Princeton, Oxford Co.; 23. Fletcher, Sarah, Newbury, Middlesex Co.; 24. Foley, M. Veronica, Lindsay; 25. Freeman, Millicent, Godfrey, Frontenac Co.; 26. Hall, Agnes, Plattsville, Oxford Co.; 27. Harvey, Elizabeth, Bruce Mines; 28. Hastie, Wilhelmine, Shegaiandah, Manitoulin Is.; 29. Henry, Margaret A., Eberts, Kent Co.; 30. Hess, Freda C., Zurich, Huron Co.; 31. Howey, Florence, Leamington; 32. Inglis, Bertha M., Maple Hill, Bruce Co.; 33. Jamieson, Annie, Renfrew; 34. Kilgore, Elsie M., Kinburn, Carleton Co.; 35. Kinnear, Mabel, Melville, Pt. Edward Co.; 36. Leake, Ethel M., Chatham; 37. Lymburner, Aletha, Basingstoke, Lincoln Co.; 38. McCombe, Reta L., Durham; 39. McDonald, Margaret, Wyoming, Lambton Co.; 40. McGirr, Annie E., Durham; 41. McKenzie, Alvilda, Leamington; 42. McMullen, Hazel, Anson, Hastings Co.; 43. McPharlin, Jean, Essex; 44. Madill, Margaret, Shelburne; 45. Marchand, Adele, Windsor; 46. Martin, Clare, Deseronto; 47. Mason, Emma L., Mt. Brydges, Middlesex Co.; 48. Matthews, Audrey S., Petrolia; 49. Monahan, Agnes, Brantford; 50. Morison, Annie B., St. Marys; 51. Munro, Rubena, Apple Hill, Glengarry Co.; 52. Nattrees, Ethra V. F., Woodbridge, York Co.; 53. Neelands, Ada, Forest; 54. Park, Louise, Alvinston, Lambton Co.; 55. Patterson, Annie, Alliston, Simcoe Co.; 56. Payne, Maud E., Whitebread, Lambton Co.; 57. Redick, Luella, Pearl Hill, Middlesex Co.; 58. Ross, Ethel, Martintown, Glengarry Co.; 59. Rowe, Janette L., Ridgetown; 60.Scovil, Florence, Athens, Leeds Co.; 61. Shephard, Rose, Beamsville; 62. Shields, Bertha A., Caistorville, Lincoln Co.; 63. Slater, Ruby E., Waterdown, Wentworth Co.; 4. Sterritt, Maggie, St. Marys; 65. Stewart, Florence, Whitby; 66. Stewart, Katie, White Lake, Renfrew Co.; 67. Taylor, Melissa I., Castlemore, Peel Co.; 68. Teskey, M. Gwendoline, Appleton, Lanark Co.; 69. Whelan, Rachel, Brudenell, Renfrew Co.; 70. Wilson, Margaret J., Harrington, Oxford Co.; 71. Wilson, Mary E., Snelgrove, Peel Co.; 72. Winters, Edith, Pembroke; 73. Thrush, Katherine, Dunnville; 74. Smirle, Sybil, Morewood, Dundas Co.; 75. Bailie, Mabel, Dungannon, Huron Co.; 76. Brown, Mabel, Cairngorm, Middlesex Co.; 77. Quinn, Rose, Ferguson's Falls, Lanark Co.; 78. Aiken, Olive, Gore Bay, Manitoulin Is.; 79. Porter, Blanche, Gore

CHILDREN'S SCHOOL GARDEN ALONGSIDE THE TEACHERS GARDENS.

**The Value of the Work.**—All over the world where education is held in esteem, educationists are devising plans for making the schools better suited to serving the needs of the boys and girls who will soon have to go into the world to make their living. Most are agreed that the service will be best performed by having the right kind of teacher and the specially trained teacher placed in charge of the schools. In this connection the experiment of the Ontario Department of Education and the Ontario Agricultural College should be of great value and help towards a solution of the so-called "rural school problem."

In order to find out in how far the efforts of the College might be considered successful, an inquiry was made amongst the teachers of the class of 1909, one year after they had received their training, they were asked through a circular letter a number of things concerning the usefulness or non-usefulness of the College training as they had tested it in their year's teaching. Replies were received from nearly all, and without exception, an acknowledgment of practical benefit of the training was made. A consideration of some of the replies may be of interest. The questions asked referred to the different phases of their work along the lines in which they were trained here—what subjects had been found most adaptable; how far they had been able to introduce school gardens; what encouragement they had received from trustees, parents, pupils and inspectors; what the difficulties of the work had been; what they had found to be the best method of taking up the work in the school; whether their training had helped them in their intercourse with the people of the district in which they taught; what agricultural books were represented in the school libraries; whether there was any change to be marked in the attitude of people in the country towards education, etc.

In general, the conclusion must be reached that the work of the teachers as a whole was acceptable. Most of the teachers are remaining at their schools for another term, and in many cases at increase in salaries. Where teachers have changed to other schools it has been in many cases at an increased salary, and in order to be able to find a more favorable field to take up school garden work under a board of trustees that would support them.

One teacher who was forced on account of her health to give up a heavy country school writes:

"I was very sorry to have to resign, for several reasons: (1) Because School Gardening could have been successfully carried on there this year; (2) Because the people appreciated work done so much; (3) Because they offered me $650.00 to stay."

One of the chief drawbacks to our teachers' carrying out instructions in Agriculture lies in the public attitude towards examinations. Education and passing examinations are apparently synonymous terms in a great many places yet. Evidence of this comes from different sources. The teacher quoted, speaks for many teachers throughout the Province.

"To be strictly honest, I must say that neither the pupils nor the parent seemed to have any desire to have Agriculture taught in the school. The one aim of the parents was to have their children pass examinations, and of course Agriculture did not contribute to that end. Furthermore, I had so many classes that I worked faithfully every minute of the time from nine in the morning until four in the afternoon and could never get as much of the actual school work covered as I knew to be necessary in order to have the pupils thoroughly prepared for their examinations."

In reply to the enquiry "In what way has it been of benefit to you in your work or in your coming or going amongst people?" the following observations have been made:

"It has helped to bring the pupils into closer contact with me as a teacher and awakened a wider interest in the school for both teacher and pupil."

"It has broadened my ideas and taught me to keep my eyes open."

"Have been asked quite frequently to identify weeds found on neighboring farms."

"It has helped me to see beauty in the common things about me."

"I feel that the school and the farm are on the same level."

"It makes pupils inquisitive concerning the things they see every day."

"I observe things that hitherto were passed unnoticed."

"It has broadened my ideas of Agriculture and given me greater insight into and sympathy in farm life."

"I have been better capable of carrying on interesting conversation-lessons, agriculture lessons, etc., with pupils, and in some instances have revealed useful facts to farmers, re weeds, new crops, etc."

"I find I can become interested in the people more readily because I am interested in and know something of their work."

"It has created an interest among the children in agricultural work, and thus aroused the interest of the parents in the children's work."

"The course made me a more intelligent and sympathetic visitor among the people. It increased my real value as a teacher and individual."

"Some people imagine that teachers are good for nothing excepting the three R.'s. I find I can converse fairly intelligently with our farmers on work which directly interest them. I have been able to identify some of the weeds which the children bring in. I think it gives the teacher greater prestige among the people."

"Enables me to meet people on their own interests."

"It has given me better chances to study the child."

"It has helped me in a better understanding of the people's work; easier for me to converse with them."

"The multiplication of interests in school and out of school seems to result in an increase in the joy of living for pupils and teacher."

"I used to dread teaching lessons on Nature Study. Now I understand what to take up, and enjoy it very much."

"I get from it many valuable ideas in making clear other subjects of study."

"I have a higher view of Agriculture, and try to have pupils and people take a similar view."

"People who are interested in Agriculture were interested in my work, and they liked it because I took an interest in their work."

As everyone knows, our respected Dean has lately become possessed of a dog.

In an evil hour, attracted doubtless by the innocent, faithful look in the animal's eyes, he was beguiled into paying ten dollars for him. He is now seeking for some one to adopt the dog permanently. The animal is causing too much excitement around college altogether.

The dog was christened "Pete," after Pete Dempsey. The trouble with Pete is that he is too faithful. He cannot bear to be separated from his master. Wherever the Dean goes, there Pete is sure to follow. This devotion, although very touching, is sometimes embarrassing. Pete was first quartered in the horse stable. During the night he ate his way through two doors, entered the kitchen through the window, broke five plates and dragged a big roast of beef upstairs to his master's room-door, where he deposited it as a proof of his undying affection. The Dean found him sleeping peacefully beside the roast when he rose in the morning.

After that nothing short of iron doors could hold the faithful beast away from his beloved master, so he was locked in the office vault for the night. He reduced the contingency ledger to fragments and ate up seven College calendars and a sheet of postage stamps. In consequence of an attack of indigestion following this exploit Pete was very quiet for a few days, but he again demonstrated his love for his master last night by visiting the poultry department and securing a choice Buff Orpington pullet. The lady school-teachers and the Macdonald girls live in terror of their lives because of Pete. When Pete enters a room everybody gets on the table. He attempted to lick Don Creelman's face the other day and nearly swallowed him. However, there will be a faculty meeting held to-morrow to decide on Pete's future. He will probably be assistant Dean next fall.

Normal Girl (noticing honey on the table for supper)—Oh, I see they keep a bee here.

* * *

If any of our June visitors don't like this institution, let them complain to the girls in residence: they are running the place at present.

* * *

Farmer—Do you think that new barn will hold together in a hard wind?

Contractor—Oh yes, I think it will alright, after it's painted.

* * *

Mallory—I understand they are going to build a new wing to the horse stables.

Hunter—Oh! What's that for?

Mallory—To stable the goat that the Freshmen are to ride next fall.

* * *

Normalite (to Chinese laundryman)—What is your name?

Chinaman—My name, Lee Wong Foo.

Normalite—This is my laundry—Miss Gwendoline Adele Vere de Vere—but I shall never remember your name. I will call you John for short.

Chinaman—Velly well, I call you Charley.

* * *

The poultry department report a largely increased egg record since the departure of the second year men for home.

* * *

On a recent Saturday afternoon the fourth year men played baseball, or rather tried to play left-handed baseball, against the girls of Macdonald Hall. One noticeable feature of the game was the tendency shown by the men to stay as long as possible on bases, and distract the attention of the fair players from the game by entering into conversation. Clement was an especial offender in this respect, seeming to have particular affection for third base. He would career around the diamond until he got to third base, and there he would stop dead, and neither the entreaties of the spectators nor the sarcastic remarks of his fellow-players could move him. Main, who was catching, got so close to the batters that on two or three occasions be narrowly escaped getting whacked with the bat Notwithstanding the deplorable practice to which the men resorted, they were well beaten.

* * *

Little Annie Wade was hearing her Sunday School teacher giving a temperance lesson the other Sunday. "Liquor is very bad for little babies," said the teacher. "Well," Annie replied, "Father buys liquor for the lambs in springtime, and if it is good for little lambs it ought to be be good for little babies."

* * *

## More First Year Views on Scott's "Ivanhoe,"

A Knight-errant was a warrior who wandered around looking for fame, glory or trouble.

Rowena was a lady of extra good figure and was the "leading lady" at the tournament.

Athelstane was a glutinous fellow, who thought about nothing else but his food. At the tournament he fought till he lost his sword in the limb of a tree, then he went at it with his hands.

* * *

McAleer (defending the U. S. A. railroad system with some warmth)—Well, if the Pennsylvania Railroad is not as long as your C. P. R., at any rate it is just as wide.

Since the departure of the ravenous host of Freshmen and Sophomores the Fourth Year have been regaled royally in rseidence. Shibley added 1 lb. per day to his weight for 30 days. Wade Toole beat him by a few ozs., and even Longley put on some fattening increase. One day, after all the meat in sight had been consumed, MacKay was sent down town to the butcher's for more.

While there he met Miss H——, and ,entering into conversation completely forgot what he was sent to get. In this elated state of mind he returned to residence with 20 lbs. of suet.

* * *

Discrimination — What do you charge for your rooms?

"Five dollars up."

"But I'm a student——"

"Then it's five dollars down."—Cornell Widow.

A Frenchman who was having a greet deal of trouble to distinguish the genders, while he was beginning English. went to an Englishman for some assistance, and said: "I have some questions I wish to ask you, but I dislike to cock-roach upon your time." "Not cock-roach," replied the Englishman, "but hencroach." "Ah, ah—those genders again," said the Frenchman.—Ex.

* * *

### That Bogey Again.

..**Young lady** (taking Short Course in Apiculture; to Mr. Pettit)—Don't you think that if this Reciprocity goes through, it will increase foul brood in Canada?

* * *

Little dabs of powder,
Little spots of paint,
Make a silly school-girl
Look like what she ain't.

---

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**Simpler, Stronger, Cheaper and**

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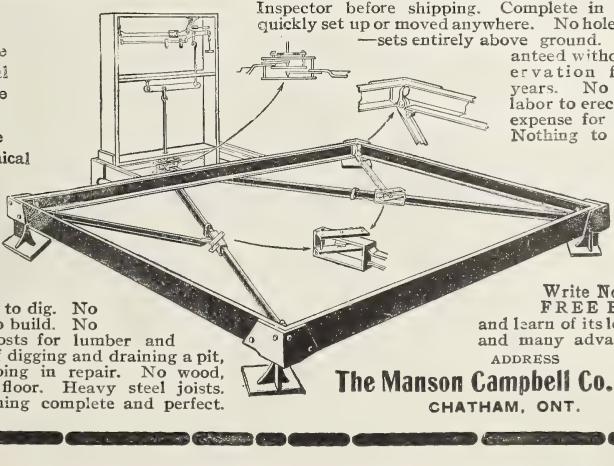

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Write Now for
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### Politeness.

Are you quite comfortable, dear?
Yes, love.
The cushions are easy and soft?
Yes, darling.
And there is no draught at all?
No, dearest.
Then change seats with me, will you?—Ideas.

* * *

'Arf a hinch, 'arf a hinch
'Arf a hinch honward,
'Ampered by 'obble skirt,
'Opped the "400."

Unremitting kindness — When dad has not sent a cheque for six months.

* * *

"She swept the room with a glance." But it didn't make it much cleaner.

* * *

There is a competition on just now to see who can grow the best side board whiskers. Among the contestants may be noticed King, Britton, Millar, and Jarvis. At the time of going to press Eric Jarvis has the most substantial growth and this gives him a very aristocratic appearance.

All ready for Galt Shingles

**Don't buy roofing from force of habit. Be progressive.**

Make your new barn better than your old one—or make your present one better than ever before—*by putting on a roof of "Galt" Steel Shingles.* The wood Shingles of today can't give you satisfaction and are a constant expense. "Galt" Steel Shingles make a permanent, storm-proof, fire-proof and lightning-proof roof that saves your money for you every year in protecting barn and stock, and in doing away with repairs.

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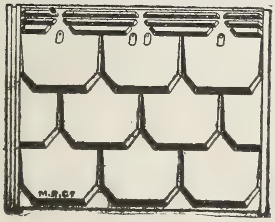

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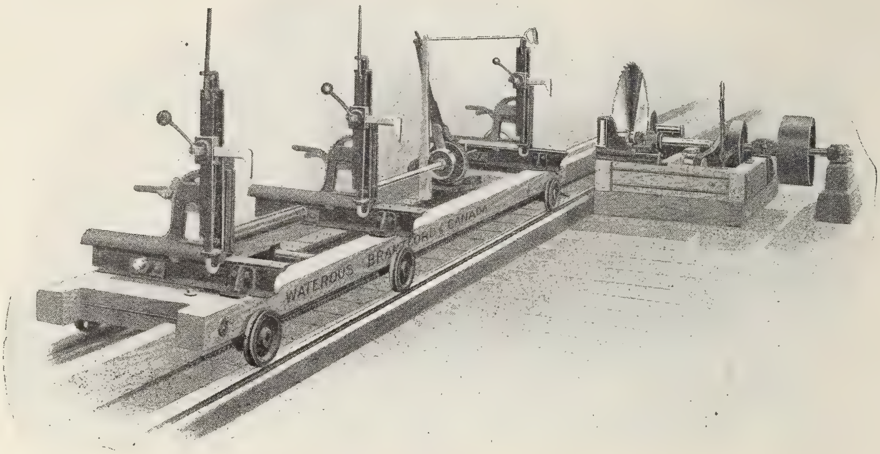

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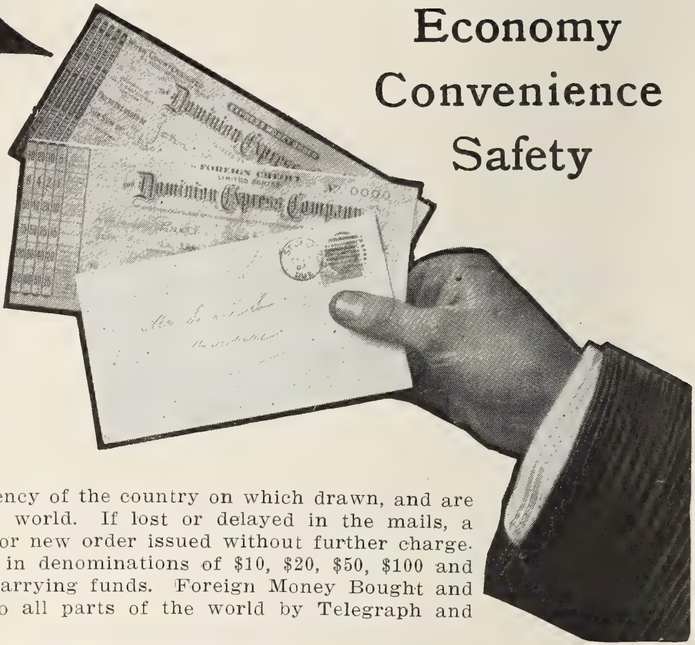

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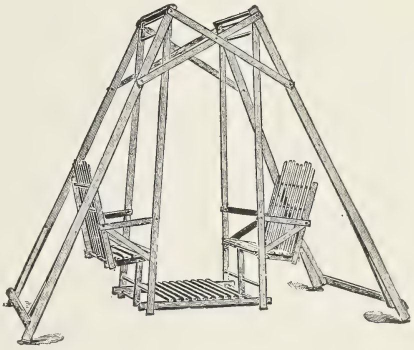

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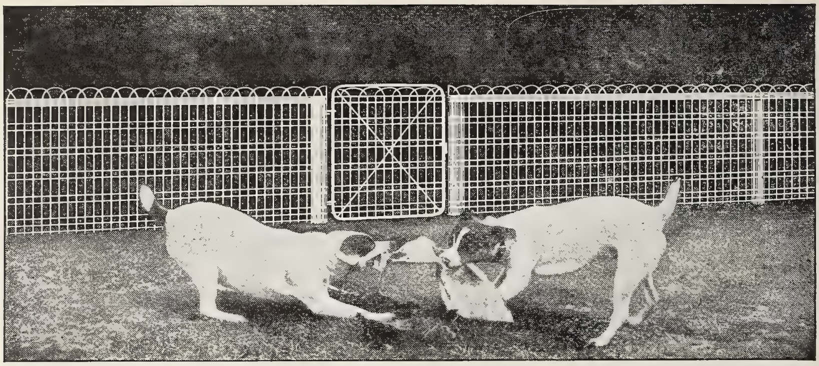

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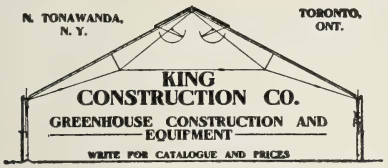
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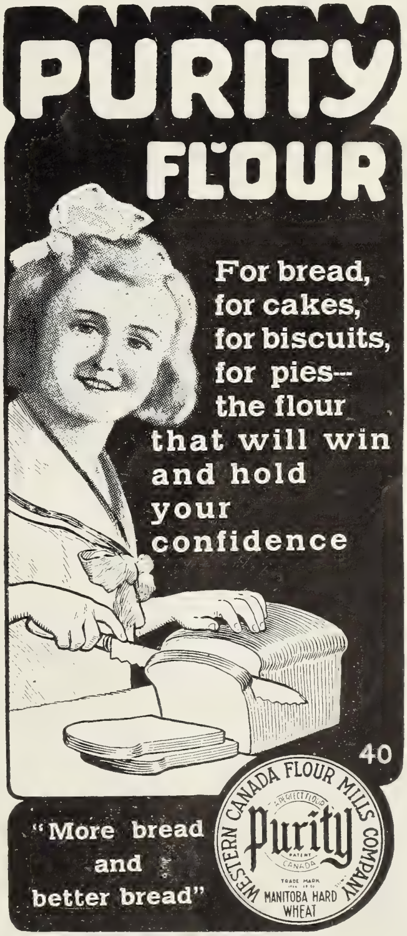
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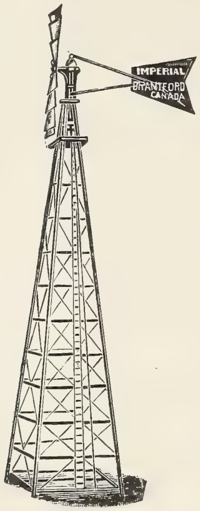

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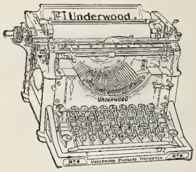

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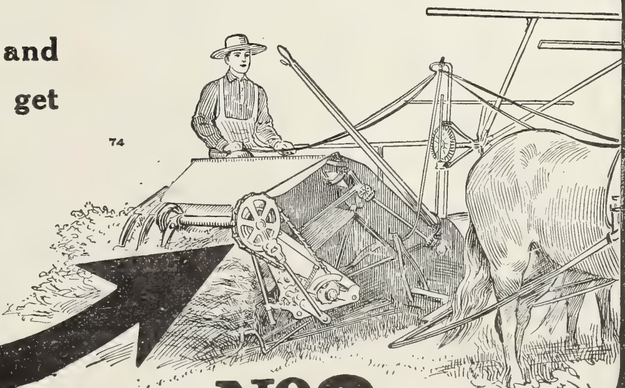

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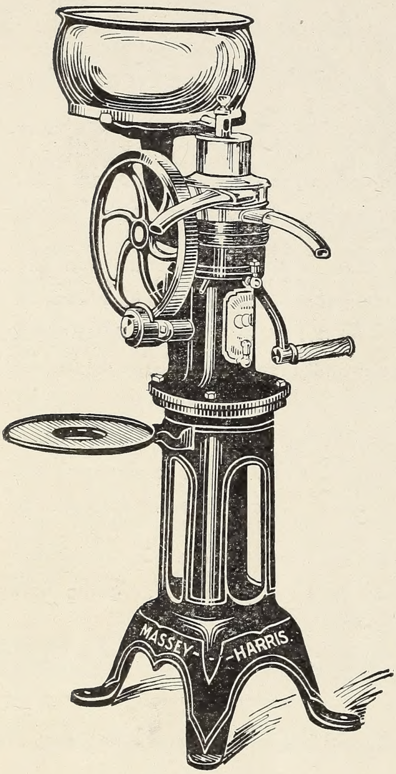
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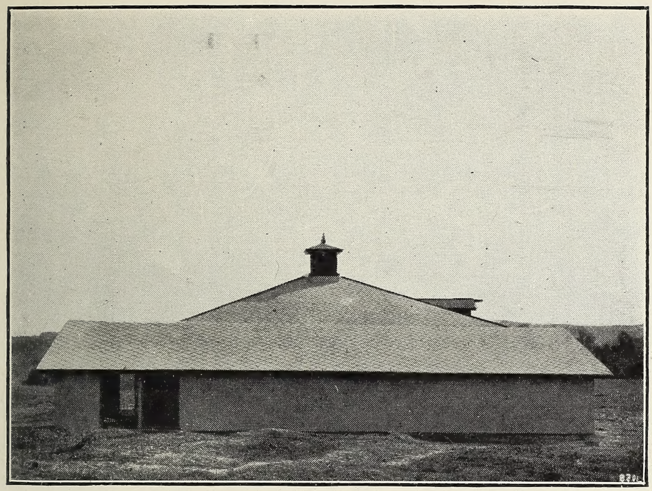

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The College is a Government institution, designed primarily for the purpose of giving instruction in all branches of military science to cadets and officers of the Canadian Militia. In fact it corresponds to Woolwich and Sandhurst.

The Commandant and military instructors are all officers on the active list of the Imperial army, lent for the purpose, and there is in addition a complete staff of professors for the civil subjects which form such an important part of the College course. Medical attendance is also provided.

Whilst the College is organized on a strictly military basis the cadets receive a practical and scientific training in subjects essential to a sound modern education.

The course includes a thorough grounding in Mathematics, Civil Engineering, Surveying, Physics, Chemistry, French and English.

The strict discipline maintained at the College is one of the most valuable features of the course, and, in addition, the constant practice of gymnastics, drills and outdoor exercise of all kinds, ensures health and excellent physical condition.

Commissions in all branches of the Imperial service and Canadian Permanent Force are offered annually.

The diploma of graduation, is considered by the authorities conducting the examination for Dominion Land Surveyor to be equivalent to a university degree, and by the Regulations of the Law Society of Ontario, it obtains the same examination as a B. A. degree.

The length of the course is three years, in three terms of 9½ months each.

The total cost of the course, including board, uniform, instructional material, and all extras, is about $800.

The annual competitive examinations for admission to the College, take place in May of each year, at the headquarters of the several military districts.

For full particulars regarding this examination and for any other information, application should be made to the Secretary of the Militia Council, Ottawa, Ont.; or to the Commandant, Royal Military College, Kingston, Ont. H.Q. 94—5 9—09.

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